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**Civil Defense Course Development Techniques  
A Course in State Level Civil Defense Staff Operations**

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prepared by

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## ABSTRACT

The results of developing for civil defense a course based on techniques customarily employed in developing courses for weapon system's hardware development are presented. The results are presented in the form of a course in State level civil defense staff operations. Preliminary test of the materials suggests that a vital, needed course has been obtained and that, at least for the subject matter area investigated, the technique is appropriate.

## ACKNOWLEDGMENTS

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June 1964

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## INTRODUCTION

This course in State Level Civil Defense Staff Operations was developed to investigate the practicality of developing civil defense courses in a manner similar to that often involved in developing other weapons system courses. Specifically, the attempt has been made to derive a course on the basis of the performance requirements derived from a task analysis of the system. Thus, the end products represent the outcome of a feasibility study to investigate the type of results to be anticipated from the application of the methods customarily employed in developing courses for weapons system hardware operation and maintenance personnel, to a complex area within the civil defense personnel subsystem.

As a result of a study<sup>1</sup> to determine training requirements for State level civil defense personnel, it was concluded that training is urgently required at the State level in tasks related to the following general areas: (1) State civil defense organization, (2) State civil defense functions, and (3) State level civil defense skills. Specifically, it was concluded that State level civil defense training is required for the following groups of personnel: (1) State civil defense staff, (2) State government personnel, and (3) other non-government personnel with emergency assignments to the management of specialized State civil defense functions.

### Course Level

The course material presented in this report represents an introductory course for new State level civil defense staff personnel. The proposed audience is persons with little, if any, background in civil defense organization and administration. Thus, it does not fill any need for advanced training. Moreover, it is assumed that the personnel are trained (or will be trained) in the specific skills required for their civil defense job function. Accordingly, the course attempts to describe what must be done, rather than how to do it.

### Sources Analyzed

The course material prepared in an attempt to meet these requirements is based mainly upon a detailed analysis of the civil defense publications of seven States--California, Missouri, North Carolina, Oklahoma, Oregon, Pennsylvania, and Vermont. These States were chosen for study partly because of the recency and the usefulness for the present purposes of their available publications and partly as a sample of various aspects of State size, population, geographic location, degree of urbanization.

The analysis of the available State level civil defense publications of these States was performed with the aim of establishing a library of the different operations that must be performed by any State civil defense organization in any time phase, whether before, during, or after an emergency. From the State publications, originally approximately 10,000 position-task data cards were prepared, using the language of the publications. These data cards were reduced to about 1,500 position-task cards by generalizing and summarizing the language used to a language suitable to all seven States. Finally, these position-task cards were reduced to 300 so-called operations statements by further summary and generalization.

These 300 statements of State level civil defense operations were grouped according to subject matter to form the outline of the course.

#### Manner of Presentation

The source of the estimates of the criticality in each of six successive time phases for each operation requires further explanation. When the source material was in the form of about 1,500 generalized and summary position-task cards, each task was read to a group of judges and each judge estimated the criticality of the task in six successive time phases.

The four judges were selected to represent different parts of the civil defense organization and to possess different civil defense backgrounds.

The six time phases were: preparatory, critical tension, attack and shelter, initial recovery, reconstruction, and final recovery. These six time phases were defined as forming a single time continuum; where the continuum begins before, includes, and continues after either an enemy attack or a natural disaster. In making their judgments, the judges assumed that the entire time phase continuum was applicable to the task being judged and that the time phase continuum continued from beginning to end, without interruption or recycling.

The definition of criticality from which the judges worked is:

The importance of this task, in each time phase, for achieving the over-all civil defense mission, as prescribed by current DOD-OCD policy, for the time period of 1963-1967.

Degree of criticality could be judged as one of five possible levels, extending from "little or none" through "moderate" to "extremely high." The results of all judges were combined for each task as the average for each time phase, obtained by assigning the value of one to "little or none," five to "extremely high," and intermediate values to the intermediate criticality intervals. When the 1,500 tasks so rated were reduced to 300 operations, criticalities were averaged for all tasks included within one operation only

when the different tasks represented task assignments to different civil defense organizational positions. Within one organizational position, different tasks were combined by taking the maximum criticality for each time phase, since the additional tasks for the one position usually consisted of details of the complete task and usually were rated lower in criticality than was the complete form of the task for that one position.

This course material, including these operations and their criticalities, is presented as suggestive rather than as authoritative. No survey of a few States' publications can pick up the special conditions that apply to each State. No one group of judges can consider all aspects of the criticality of State operations in the various States. Any statement worded so as to apply to "all States" is, by that statement alone, patently untrue, at least, for some States.

These last comments imply a further general objective of this course. The course is intended to emphasize group participation by the students. The material is intended as a core around which to develop group discussion of the particular requirements of the individual States represented by the students and observers. The methods by which the course material was obtained and developed were intended to insure that most of the planning and operations problems faced by any State civil defense organization and its staff would be brought up during the course. The solutions to these problems cannot be met, at least at present, by authoritative standard operating procedures. The solutions must be provided, in the last analysis, by the State civil defense staff

and the related groups within the State that work with the staff to provide a statewide civil defense capability.

#### Initial Trial

The materials here included were tested in Region 1. In this test, experienced civil defense persons, representing the civil defense staffs of the States of Massachusetts, Rhode Island, Maine, and Connecticut, served as "students." The course was revised to its present form on the basis of the results of the initial application. It was the consensus of the initial "students" that the course represented a vital, needed link in the civil defense training chain, is necessary in its current form and possibly as a test for a new personnel who might not be able to attend a course.

#### Instructor's Guide

The lecture materials which follow are to be used in coordination with an Instructor's Guide for State Civil Defense Staff Operations Course. The Instructor's Guide contains the operations upon which the present course is based, as well as examples of possible visual aids and reference materials. The operations properly constitute a part of the lecture materials and, as such, may be employed by the lecturer to introduce or amplify the various lecture sections to which they refer.

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<sup>1</sup> Fletcher, D. E., Macpherson, D. H., and Siegel, A. I. A core training program for State level civil defense program personnel. Wayne, Pa.: Applied Psychological Services, 1963.

1A  
Legislative and  
policy framework  
of duties

Sources Of Authority

The prime authority for the performance of any civil defense duty within the State is best derived from a State Civil Defense Act. This act will authorize and may be effected by Executive Orders issued to State government departments or agencies by the Governor. Further amplification of the act may be expressed in directives and memoranda published by the individual State government departments or agencies, including, of course, the State Civil Defense Agency. Other Statuatory authorities and Executive Orders may exist that pertain to some extent to civil defense duties within the State.

Analogous primary and secondary authorities at the Federal level are essential sources of information for key State civil defense officers especially the Director and the plans and operations officer.

Where operations between States are likely, the authorities of neighboring States are relevant to the performance of the duties of a given State. Similarly, authorities developed and published by the political jurisdictions of the State will be necessary guides to the State in the performance of its duties within the State.

Other  
political  
jurisdictions

1A  
Legislative and  
policy framework  
of duties

Reference  
procedures

Therefore, to meet the criterion that their duties be performed within the legislative framework provided by the Legislative Branches of the Federal and State Governments, the key civil defense officers within the State will require for ready reference current and complete indices and collections of the relevant authorities, including statutes Executive Orders, Agency directives and memoranda from the Federal and State levels, at the State level for neighboring States, and at the county and local levels within the State. Such indices are included as an appendix in Federal and State Civil Defense Plans, as in "The National Plan for Emergency Preparedness,"<sup>1</sup> edited and published in 1963 by the Office of Emergency Planning. For more ready and complete reference, the full texts of these various authorities may be separately bound as in the "New York State Defense Emergency Act and Related Defense Emergency Laws, 1951-1961."<sup>2</sup> published by the New York State Civil Defense Commission.

1 "The National Plan for Emergency Preparedness," Office of Emergency Planning, Executive Office of the President, United States Government Printing Office: 1963, Appendix A.

2 "New York State Defense Emergency Act and Related Defense Emergency Laws, 1951-1961," New York State Civil Defense Commission, vii+111pp.

1A  
General  
definition of  
duties

A Model State Civil Defense Act has been developed and sponsored by the Council of State Governments. The form and content of the State's authorization for civil defense activities within the State will, of course, vary from State to State. Summaries comparing the various States on certain aspects appear in Federal annual reports and annual statistical reports.

Model acts

In its most general aspects, the State Civil Defense Law states definite responsibilities that each branch of the State Government is to hold in an emergency, with the basic civil and military defense responsibility being assigned to the Governor and with the provision of a legislative framework for the performance of the duties of the State Civil Defense Agency and its Director.

General intent

1A  
Specific  
definition of  
duties

This definition should list the functions of civil defense.

Listing of areas

For the purposes of developing this course, a list of forty-two functional areas of civil defense was devised. This list is presented here as a "check-off" list; its use within a State will depend upon the current organizational structure within the State's government, upon areas that require special emphasis within the State, and upon other policy matters.

The definition of civil defense in the State Civil Defense Law should, also, state the activities that are excepted from civil defense. Such excepted activities may include political, military, certain private welfare activities, and others.

Excluded areas

**1A**  
Assistance in  
drafting  
legislation

Assistance in developing a State Civil Defense Act is  
provided by the State Department of Justice and the State  
Attorney General.

Assistance  
procedures

Any of the State Civil Defense Services may provide  
similar assistance to particular government or private groups  
to which they are related because of the particular civil defense  
mission of the service. For example, the State Civil Defense  
Training Service may assist public and private schools within  
the State in drafting new training legislation.

1A  
Authorization  
and  
appropriation

Although a carefully prepared civil defense law is necessary to an effective State civil defense program, the law alone cannot initiate or maintain the momentum which any public program requires if it is to develop realistically towards its objective of effective service to the public. This momentum can best be provided by annual authorization and appropriations procedures. These procedures would usually involve formally scheduled hearings conducted by the authorizing committee of the Legislature, debate within the Legislature as a body, and passage of specific appropriations allocated to stated program objectives for the next fiscal year.

Continuity from year to year to develop this momentum can be achieved by a combination of the following. First a fully informed and responsible representative of civil defense should be the principal source of information to the authorizing committee. This person would usually be the State Civil Defense Director. However, in some cases the plans and operations officer of the State Civil Defense Agency or a particularly well qualified person within the State Civil Defense Legal Service may be a more appropriate civil defense representative.  
This representative would ideally carry out this duty on a continuing basis, from year to year.

Second, a continuing effort should be made to develop  
within the members of the authorizing Committee an under-  
standing of civil defense. If hearings have not in the past been  
conducted regularly, this may require supplementary briefings.  
If a formal authorizing procedure has not been developed, the  
Legislature may be encouraged to do so by means of such  
briefings.

Third, at each yearly hearing of the authorizing Com-  
mittee the civil defense representative should present at least  
the following information. He should report tangible evidence  
of progress made during the current fiscal year in the use of  
that year's appropriations for specific aspects of that year's  
civil defense program. He should relate this progress--or  
lack of progress--to the over-all civil defense program for  
the State. Finally, he should propose a realistic program  
with related appropriations for the next fiscal year and point  
out in what way this proposed program will, if carried out,  
relate to the over-all State civil defense program. Under  
special circumstances, he may recommend that the Legis-  
lature review certain parts of the State Civil Defense Law  
to correct certain inadequacies that were made evident in  
carrying out the current year's program or that may hamper  
carrying out the proposed program for the next year

1A  
Authorization  
and  
appropriation

TEXT

The purposes for civil defense of attendance at legislative hearings and sessions were summarized as follows  
by the Honorable Steuart L. Pittman in his closing statement  
on July 11, 1963, to the Subcommittee of The House Armed Services Committee of the House of Representatives<sup>1</sup>:

I hope that this is the beginning of a close working relationship which will give us the benefit of an authorizing Committee that understands the problem of civil defense and can provide us with the kind of wisdom restraints and sponsorship which is the product of a good working relationship between a committee of Congress and an executive agency. The program has suffered in recent years from the lack of an annual authorizing procedure. For my part, I intend to keep you posted on the good news and the bad.

---

<sup>1</sup> "Closing Statement, The Honorable Steuart L. Pittman, Assistant Secretary of Defense (Civil Defense) before Subcommittee No. 3 of The House Armed Services Committee, House of Representatives, July 11, 1963" p. 19.

Summary

Staff Organization

The establishment of the State Civil Defense Agency, its Director, and its staff must be, in the typical State law, in accordance with the State civil defense plan with the approval of the Governor. The actual establishment of the Agency may be in the form of an Executive Order from the Governor, setting up the State Civil Defense Agency as an agency of the State's Executive Branch. This Executive Order will include the statement, authorized by the State civil defense law, that the agency will continue to exist until dissolved by a similar gubernatorial Executive Order.

State  
procedures

The analogous actions at the Federal level proceeded along two lines. First, civil defense operating responsibilities were assigned to Stuart L. Pittman as Assistant Secretary of Defense for Civil Defense by the following chronological steps:

Federal  
procedures

During July 1961, civil defense functions remained part of the responsibility of the Office of Civil Defense Mobilization (OCDM). On July 20, 1961, the President issued Executive Order 10952, assigning civil defense functions to the Secretary of Defense, effective August 1, 1961. The Secretary placed his Special Assistant in charge of civil defense affairs for an interim period in which to establish an Office of Civil Defense.

On August 31, 1961, the Secretary, by departmental directive, established the Office of Civil Defense to be headed by one of the Assistant Secretary of Defense positions authorized by the National Security Act of 1947, as amended. The major civil defense functions and responsibilities delegated to the Secretary of Defense by Executive Order 10952 were assigned to the Assistant Secretary of Defense (Civil Defense) with appropriate support from all elements of the Department.<sup>1</sup>

Second, the responsibility for the post-attack recovery program

was assigned to Edward McDermott as Director of the Office of Emergency Planning in the Executive Office of the President.

This responsibility includes the functions of investigation,

advice, coordination policy formulation and preparedness.

The steps taken to separate these functions from those assigned to the Department of Defense by Executive Order 10952 and to change the name of the Office of Civil and Defense Mobilization to the more appropriate name of the Office of Emergency Planning by H. R. 8406 are summarized in the first and second information bulletins from the Office of Emergency Planning.

<sup>2, 3</sup>

<sup>1</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1962," United States Government Printing Office: 1962, p. 8.

<sup>2</sup> "Office of Emergency Planning to Set Policy for Survival," Office of Emergency Planning, Executive Office of the President, Information Bulletin No. 1, September 30, 1961, p. 1.

<sup>3</sup> "OCDM Becomes Office of Emergency Planning to Coordinate Nonmilitary Preparedness," Office of Emergency Planning, Executive Office of the President, Information Bulletin No. 2, September 30, 1961, p. 3.

Selection of locations for Civil Defense Agencies below the State level is made according to the general criterion of civil defense of the public and according to more specific criteria, such as: current judgment, strategy, area, population, and vulnerability or target and non-target areas. The selection is made at the State level and becomes a part of the State civil defense plan as a guide to the establishment of the particular county, area and local civil defense Agencies.

Criteria for locations within the State

The eight regional offices of the Office of Civil Defense are organized under the Assistant Secretary of Defense for Civil Defense in order to carry out most of the operational activities of the Office of Civil Defense with the States. These activities include handling commitment of funds for Federal matching assistance to the States and for the proposed shelter development program. The technical staffs of these regional offices are set up so as to allow support of State and local survival planning and State and local participation in the Office of Civil Defense shelter survey, radiological monitoring, warning systems, and communications.

Federal and regional locations

1B  
Organizing  
civil defense  
groups

Federal  
criteria

The Federal civil defense organization was reorganized  
during fiscal year 1962, as shown in the accompanying chart,  
to be adaptable and responsive to the new civil defense pro-  
gram.

The importance of the physical location of the staff  
was illustrated by the movement of the Federal staff from  
Battle Creek to Washington. This move was largely com-  
pleted by the end of fiscal year 1962. This change not only  
made possible the full use of Defense Department resources,  
but also it was necessary in reorienting the Battle Creek staff  
to reflect the new civil defense program and the related staff  
reorganization.

The organization of civil defense within the State  
follows the general criterion of carrying out the purposes of  
the State civil defense plan. The civil defense organization,  
once set up, should be reviewed periodically for possible  
improvement in meeting current civil defense programs.

State  
criteria

At the State level, the civil defense organization may  
be set up to reflect two organizational dimensions. The  
organizational positions may vary according to whether the  
duties assigned to those positions are administrative or

technical. Second, the organizational positions specified for normal or pre-emergency conditions may vary from those specified for emergency conditions. Of course, the total organizational chart must clarify the relationships between the administrative and technical positions and the manner of transition from normal to emergency organization.

Under normal conditions, the key installation with- in the State is the State Civil Defense Agency, usually located at the State Capitol. With the transition to emergency con- ditions, the Agency functions as the emergency operating center for the State.

Key  
installation

The administrative staff may include, under both normal and emergency conditions, the Director, a deputy director, and a plans and operations officer. For emergency operating center planning and operations, the added administrative position of an emergency operations center officer is required.

Administrative  
staff

In those States where emergency conditions will require civil defense operations in many functional areas, it may be required to set up an additional group of administrative

organizational positions, specialized coordination officers. Each coordination officer would be assigned the task of preparing for and carrying out emergency coordination of activities within a stated set of functional areas. For example, a coordination officer for public safety may be assigned to coordinate the emergency operations in the fire, police, military affairs, rescue, and warden functional areas. Or, a coordination officer for public health and welfare may be similarly assigned the areas of health, medical, mortuary, registration, religious affairs, and welfare.

The technical staff under emergency conditions  
can be considered to consist of chiefs of each of the Civil Defense Services. The missions of these Services should cover all of the forty-two functional areas mentioned above. Excepted is, of course, the administrative functional area, which is carried on in an emergency by the group discussed, above: the Director, deputy director, and plans and operations officer, with the addition in an emergency of the emergency operating center officer, and in some cases with the addition of coordination officers. Also excepted are the

Technical  
staff

proper functions of the Executive, Judicial, and Legislative Branches of the State Government, whose emergency responsibilities or missions should be clearly stated in State statutes as continuations of their normal responsibilities, with explicit definition of the circumstances under which they assume specific extraordinary powers in their own areas of responsibility.

Under normal conditions, also, all of these functional areas must be considered at least in planning. For many areas, such as police activities, the governmental group assigned to the area carries out the detailed planning while an administrative officer within the Civil Defense Agency coordinates the planning with other civil defense planning. For other areas, the planning activities are so extensive that a specialized technical officer is normally included in the Civil Defense Agency, as is done in some States when a radiological officer is included in the normal civil defense staff. Functional areas in which actual operations begin before an emergency are, where possible, represented by specialized technical officers on the pre-emergency staff of the State Civil Defense Agency. One such

officer may be responsible both for the technical operations in each of several functional areas and for the administrative task of coordinating the operations among these same functional areas, as would be the case for the communications and warning officer, for the fiscal and supply officer, or for the training and information officer. Finally, certain functional areas may be operational chiefly in the pre-emergency period, therefore requiring a technical officer on the normal staff but not on the emergency staff, as may be the case for the shelter officer or the women's activities officer.

To use their extensive pre-emergency experience, it may be organizationally efficient to assign specific emergency positions to the technical officers of the normal State staff, considering in the assignment where in the emergency organization they will be most needed and where the greatest part of their experience will be useful. For example, the training and information officer may in an emergency become the coordinator for training and information, the chief of a combined Training and Information Service, or the chief of either the Training Service or the Information Service. Such transitions in position require explicit definitions

1B  
Organizing  
civil defense  
groups

of the several organizational positions involved and careful  
review of the entire normal versus emergency and  
administrative versus technical organizational table.

1B  
Organizing  
Civil Defense  
Services

Each State Civil Defense Service may be organized as a specific form of a general service organizational table.

General Service  
organizational  
table

Since the chief of each State Civil Defense Service is a member of the staff of the State Civil Defense Agency, he may also be referred to as a technical officer of the Agency. For example, the Chief of the State Civil Defense Intelligence Service may also be the intelligence officer of the State Civil Defense Agency

Chief

All Services will not require formally established headquarters. For certain Services, the Service headquarters may more appropriately be named according to its function, for example, the State Communications Center may be a preferred name to the State Civil Defense Communications Service Headquarters.

Headquarters

Services will vary considerably in their needs for installations other than headquarters installations. Examples of specialized installations and the Services that control them are listed in the handout materials.

Other  
installations

Similarly, only certain of the Services will include field units. Examples of field units that may be con-

Field units

IB  
Organizing  
Civil Defense  
Services

trolled directly or indirectly by certain Services are also shown in the handout materials.

Formally organized auxiliaries may be included in certain Services, for examples, in the Fire, Health, Police, Medical, and Rescue Services. Individual radiological monitors within the State may be considered organizationally as auxiliaries of the Radiological Service.

Auxiliaries

The intrahervice functions performed by the support sections of a Service may include any or all of the following functions: administration, communications, fiscal, intelligence, legal, manpower, resources, supply, and training. Depending upon the complexity of the Service's support requirements and the relative importance to the Service of these various intrahervice support functions, the Service may set up a single support section with different specialized technical officers to carry out these various functions or it may set up separate support sections for the different functions or for different groups of functions.

Support sections

The operations sections of a Service will be set up according to the operational mission of the Service. For example, the Warden Service may have a single operations

Operations sections

1B  
Organizing  
Civil Defense  
Services

section referred to as the "Plans and Operations Section."

On the other hand, the diversity of operations performed by the Welfare Service may require separate operations sections, such as "Clothing, Feeding, Financial Assistance, Housing, Reception, Registration, and Special Services Sections," with a coordinating "Operations Section."

## Staff Administration

The organizational table for civil defense within the State is mainly, of course, a description of the chain of command.

In all States, the Governor is chief in command of all government groups within the State. From this point of view, the State Civil Defense Agency and the State Civil Defense Services are included in the State governmental organization. In some States, a State Civil Defense Council or State Disaster Council may be placed in the chain of command between the Governor and the State Civil Defense Agency to act for the Governor in his command of the civil defense organization. The form and functions of such a council are discussed in more detail, below.

Also, included below the Governor in the chain of command is the National Guard. The Governor has authority over the National Guard, by way of its Adjutant General, until the National Guard is called into service by Federal military authorities.

The form of command by the Governor is, of course, prescribed by State law and the State civil defense plan, such that emergency command of civil defense tasks throughout the State and in other States consists of the Governor's putting the civil defense plan into effect.

I C  
Chain of command

Organizational table

Governor

Agency and Services

Council

National Guard

Criteria

IC  
Over-all  
administration  
and direction

Within the civil defense organization of the State, as suggested in discussing the organizational table, administra-  
tion and direction may be general or technical in character.

Kinds

The Governor, the State Civil Defense Council, and  
the State Civil Defense Agency, through its Director and  
deputy director, exercise general and executive administra-  
tion and direction, by way of the chain of command.

General and  
executive

The plans and operations officer of the State Civil  
Defense Agency, technical officers on the staff of the Agency,  
and the chiefs of the State Civil Defense Services exercise  
direct, technical, and operational administration and  
direction of the specialized activities of their respective  
organizational elements.

Direct and  
technical

The tasks involved represent the delegation by the  
Governor of his basic defense responsibility to elements of  
the civil defense organization and the subsequent redelega-  
tion or assignment of these responsibilities and related  
additional duties throughout the State. Therefore, each  
organizational element is under the authority of designated  
superiors. The activities of each organizational element  
are subject to approval by these designated superiors by  
means of reports, conferences, frequent contacts, and

Delegation

personal observation of the work program. The program is evaluated according to whether it is unified according to the extent to which the obtained results are effective in meeting the objectives of established plans, policies, and programs of the State, and according to consistency with rules, regulations, and orders issued by the designated superiors.

1C  
Administration  
and direction of  
specific groups

Within each State Civil Defense Service, the performance of administrative functions is analogous to that within the entire civil defense organization of the State. However, the emphasis upon technical or professional and operational administration is greater. Also, the demand is greater that the Service activities meet certain criteria.

Emphasis

The technical chain of command within each Service consists of the chief, the assistant chief, and the chief of the section assigned with the specialized Service responsibility as indicated in the title of the Service. The locus of operational command is the State headquarters of the Service; command at lower levels is carried out through Service headquarters at appropriate levels.

Chain of command

The provision of purely administrative internal support to the service may be by way of an administrative officer in the support section or an administrative section at the State and other levels, as required. This administrative support may include establishing administrative policies, supervising organizational controls, establishing and maintaining essential administrative procedures, such as record

Administrative support

keeping and reporting systems, and providing necessary services, such as preparing reports and correspondence, and keeping records and files.

The criteria that must be considered in the technical administration of specialized Service activities derive from the requirement that these activities be coordinated with the State and Federal civil defense plans. This requirement can be reinterpreted as stating that Service activities must be consistent with the statewide civil defense plan of the Service. The State, county, and local plans of the Service may be extended by standard operating procedures and by specific directives issued by or approved by the State Civil Defense Director or by Directors at county and local levels. Where possible, plans, procedures, and directives should be pre-arranged or pre-established. Within the context of the relevant pre-established plans, procedures, and directives, the chief of the Service is responsible for assuring that the Service will be capable of efficient normal and emergency operation. For operations at any time, he is responsible for adjusting the focus of Service activities as is necessary to meet actual operational conditions in major events.

Criteria

However, since the organization of the Service is largely technical, he can, even under operational conditions, allow to the technical sections within the Service considerable latitude and initiative in the areas of their professional competence.

1 D  
Advisory  
committees

### Advisory Relationships

A State Civil Defense Council is appointed in some States to serve as the principal advisory group for the Governor in all civil defense matters. It may advise the Governor directly and may, also, advise all other civil defense groups within the State by way of the civil defense organization's chain of command. It may be set up very early in the developing civil defense program of the State to guide in the first stages of planning the program. However, its advisory and liaison duties may continue with very little deviation in criticality throughout all phases of an emergency.

Council  
functions

The membership of the Council may include the Governor, the Lieutenant Governor, the Attorney General, the President Pro Tempore of the Senate, the Speaker of the House, the Adjutant General of the National Guard, and a specified number of private advisors selected for their competence in fields important to the civil defense of the State.

Council  
members

Specialized governor's advisory committees and other civil defense committees set up by the Civil Defense Agency may be established in any of the functional areas of civil defense, depending upon the needs of the State. The State

Advisory  
committee  
members

Civil Defense Director usually serves as a member of these committees, or he may delegate this duty to a specialized technical officer within the State Civil Defense Agency staff or to the Chief of the appropriate State Civil Defense Service. The other members of a specialized committee should include a stated number of persons selected appropriately from governmental and private groups throughout the State.

The areas of specialization of these committees and the time phasing of their activities will depend upon the needs of the State. For example, a rural State may require a Fire Civil Defense Committee and a separate Rural Fire Civil Defense Committee, since the fire control problems in urban and rural areas may be quite different. Further, as an example, these Fire Committees may be active in planning and then may resume activities again only when enemy fire attacks upon the State are anticipated or are in progress. Following the immediate attack period, their activity may diminish markedly. For such specialized committees, as fire committees, for example, it may be specified in the State civil defense plan that these committees provide representatives at the State civil defense emergency

operating center during emergencies to meet the need for advice on unanticipated problems in their field of specialization.

The organization and use of advisory committees is illustrated in Department of Defense Directive 5030.13,

"Regulations for the Formation and Use of Advisory Committees," April 20, 1962. Taking this Federal directive as a model, the instruction setting up the committee should contain the following elements: the authority within the State for formation and use of advisory committees, the name of the committee, its purposes or functions, its membership, its operation, and the conditions for terminating the committee. The naming of the committee as an advisory committee includes stating the person to whom it provides advice. The statement of its function should be specific enough to provide an unambiguous program of action. Its membership should be stated in terms of the total number of members, with supplementary statement of how many of these members, usually only the Chairman, are salaried and full time, and how such members are selected. Also, statements as to membership should specify the government and private groups which will provide specified

Criteria for  
use of  
committees

numbers of other members. The operation of the committee is described by statements of procedures for calling meetings, formulating agendas, recording minutes and certifying their accuracy, and adjourning meetings.

At the Federal level, the Advisory Committee on Civil Defense, with Dr. Lauriston S. Taylor as Chairman, has been active since early 1955 in reviewing, studying, and advising on research programs and scientific and technical problems of FCDA, OCDM, and OCD. Advisory committees within the National Academy of Sciences have made major contributions to civil defense. These committees have included such areas as fire research, food and nutrition, behavioral sciences, and medical sciences. Specific committees for single specific tasks have been organized by the Department of Defense, as, for example, the Civil Defense Industry Advisory Committee on the National Emergency Alarm Repeater (NEAR) System, set up on March 12, 1962.

Federal use  
of committees

Agencies which are outside the official civil defense structure may establish civil defense advisory committees. Such specialized committees work closely in a consultative capacity with the Office of Civil Defense or with State Civil Defense Agencies. A very active committee concerned

with civil defense is the Governors' Conference Committee on Civil Defense and Post-Attack Recovery. As an example in a more specialized field, many State Medical Societies have continuing State level civil defense committees.

1D  
Advisory  
procedures

The advisory functions of these civil defense committees may be considered as a special case of the flow of information through the different levels of the civil defense organization and between the civil defense organization and government and private groups.

Advisory  
information  
chain

This information chain should be clearly specified or described by the State Civil Defense Agency as part of the State civil defense plan. The information chain may be different for different activities, such as: administration, emergency information, assistance requests, and directing and supplying assistance. Once specified, this chain should be followed whenever possible. Specification and use of the Federal to local civil defense information chain is intended to provide an orderly, controlled, and effective means of conducting operations as a total national effort.

Criteria

The chief advisory relationship of the State Civil Defense Agency is with the Governor, since the Agency or its Director acts as the principal civil defense advisor for the Governor. As a part of its duty of advising the Governor, the Agency advises the State Civil Defense Council and appropriate departments or agencies with the Executive

Specific  
advisory  
relationships

Branch of the State Government. This advice should cover all civil defense matters, especially possible and actual emergencies. In this respect, the flow of information is from civil defense to governmental groups at the same level and by that route to other related governmental groups.

The source of this advice is chiefly a two-way flow of information within the civil defense organization from level to level. The Civil Defense Agency has most of its information and advisory contacts with the next higher level of civil defense--the appropriate regional office of the Office of Civil Defense, and with the next two lower levels--the staff of the State Civil Defense Agency and the area level civil defense coordinators. The content of this information is mainly technical and operational. The aim of the flow of information is to achieve a civil defense effort at all levels, that is fully organized, operationally ready, and coordinated. The State Civil Defense Agency officers and Services are responsible for keeping the Agency fully advised and for keeping this advice current.

Pre-established standard operating procedures will describe both the timing and the content of these reports.

Source,  
content  
and aim

Advisory  
procedures

ID  
Advisory  
procedures

This reporting continues in all time phases, although it may be a more critical activity in the preparatory and the initial recovery time periods and a less critical activity in the attack and shelter and the final recovery time periods. Full formal reports should be required periodically, either annually or monthly depending upon the detail and the rapidity of change of events. Other reports may be requested by the Agency or the area level civil defense coordinator. Certain specific reports may be submitted as considered necessary by the specialized officers and Services.

Timing  
procedures

Generally, the content of the information should cover all matters concerning the specialized duties of the officers or Services in question. This may include both planning and operations. It may include problems, requirements, capabilities, and status and should emphasize any especially developing situation which requires attention.

Content  
procedures

Each State Civil Defense Service may be assisted in assembling this information according to its own internal reporting system. The organizational elements of this internal system may include the chief, the assistant chief, and the specialized technical staff of the Service, at different

Source  
procedures

levels, supplemented in some cases by a State Civil Defense Committee acting as a specialized advisor to that Service or by a less formally organized group concerned with civil defense within a functionally related private group. The State Civil Defense Services may also be assisted in assembling this information by the plans and operations officer of the State Civil Defense Agency.

Although all State Civil Defense Agency officers and State Civil Defense Services are required to maintain a prescribed flow of information to the State Civil Defense Agency, certain officers and Services may act in prescribed special information chains. A coordination officer within the State Civil Defense Agency may be responsible for facilitating and insuring this interchange of information; or the Services or officers may be required to advise each other directly. In either case, the aim is to provide the same information to those Services whose operations must be closely coordinated. For example, if a State has set up a separate State Civil Defense Food Supply Service and a separate State Civil Defense Fuel Supply Service, both of these Services may be required to route all of their informa-

Other  
procedures

tion through the State Civil Defense Supply Service. If, or when these information channels will carry a heavy load, it may expedite the flow of information to have all Services concerned with supply functions report directly in one step to a coordination officer for supply.

Each State Civil Defense Service will establish training and experimental requirements or criteria for each organizational position within its structure. The criticality of the stated criteria in assigning persons to organizational positions within civil defense is greatest in the preparatory time phase, decreases in the attack and shelter time phase, and peaks again in the reconstruction time phase.

Criticality, of course, varies both with the functional area named in the criteria and with the organizational position for one functional area.

To illustrate the source of variation due to the functional area in question, it is relatively quite critical that experience and training criteria be met in making assignments in functional areas such as communications and warning, resources management and economic controls, and shelter.

To illustrate the source of variation in criticality due to the organizational position for one functional area, the requirement that the person assigned know the plans, policies, organizations, and the like of governmental organizations is highly critical for the position of the State Civil Defense

Sources

Functional area

Organizational position

Director, only moderately critical for the plans and operations officer, and relatively low in criticality for the women's activities officer.

The statement of these criteria appears, on the basis of a review of State civil defense publications, to be relatively informal. It appears that clearer definition of selection criteria is required in the States. A clear definition would be that in which both the functional area and the level of experience and training is defined for specific organizational positions, in such a manner that qualitative judgments are not required.

Many statements defining the level of experience and/or training used such general level terms as thorough, marked, considerable, some, or satisfactory. That such qualitative terms are not readily definable is evidenced by the observation that different States used quite different terms--for example, "some" as compared to "thorough"--for what was clearly one organizational position--the communications and warning officer. The level terms can be more adequately stated as years of experience required, years and type of training required, and the limits for substituting experience for training and vice versa.

Procedures  
for stating  
criteria

Stating level  
required

The statement of required years of experience may be supplemented to describe the type of experience that will be counted in adding up the total years of experience. It may be specified that this training be in certain types of organization, for example, civilian, military, industrial, government, and the like. The size of the organization may be stated, since in some civil defense positions, especially at the State level, the requirement of dealing with large and complex organizations is essential. The level of responsibility may be stated in terms such as administrative or executive, or technical, or clerical, or the like. It may be specified that this experience be recent, current, or modern, although such terms should be defined clearly.

Similarly, statements of training level should describe the type of training to be considered. Specific courses of study or specific degrees with major specialities may be stated to define the type of training. Satisfactory completion of such courses or degrees should be defined. In some cases, training type may be defined as the requirement that the person hold a current and valid license in a specified field. Such licensing state-

ments are appropriate in medicine and surgery, for example, with respect to State governmental licensing procedures. Similar licensing statements can be made for functional areas where Federal licensing procedures are appropriate, such as the FCC Advanced Radio Amateur Operator license. Certain private groups carry out analogous procedures which can be taken as training criteria, as is the case in selecting and ordaining clergymen in the various church groups. Of course, statement of the type of training to be considered is most clear for the civil defense courses available at the Office of Civil Defense Schools and Training Centers. Therefore, for many positions, it may be preferable to state the level of training required by the position in terms of satisfactory completion of specified Office of Civil Defense courses.

Defining functional areas in statements of selection criteria is a demanding task since civil defense touches upon as wide a variety of skills as does the entire occupational structure. This point is well put in describing the Federal program:<sup>1</sup>

Stating functional area required

The President's civil defense program is unique in requiring an extraordinary combination of a wide range of very different skills. This fact is well illustrated by a few examples. Consider the type of people and the organization needed to operate the procurement, transportation, warehousing, and installation of shelter supplies for a nationwide shelter program in contrast to the personnel requirements for continual reevaluation or assumptions made on the nature of attack and its immediate effects. Compare the task of mobilizing technical resources of architectural and engineering professions with efforts to create understanding of the idea of shelters in schools and acceptance by school boards, parent-teacher associations, and school staffs. In addition, operating schools for training State and local civil defense officials in a wide range of technical subjects is indeed different from developing and operating a vast system of data-gathering and analysis, which is the heart of the shelter survey program.

For functional areas met within the civil defense organization below the State level, New York State<sup>2</sup> has published a thorough set of job titles and descriptions. The form of description used in that publication is useful as a guide to establishing State level job descriptions. To illustrate the complexity of descriptions for State level organizational positions, the "Instructor's Guide" companion volume to these materials presents some of the functional areas mentioned in State publications with examples for each area of the manner in which the area was described and of the organizational positions for which experience or training was said to be required. This table demonstrates the variety

of the Civil Defense Officer's job requirements. For example, under the engineering functional area, diverse engineering areas are mentioned, all of which are not to be found in any one man's competence. Also, the list of positions mentioned as requiring some type of engineering experience and training is obviously incomplete. The shelter officer would need some engineering competence, although perhaps not on an advanced level. The chief of the State Civil Defense Institutions and Installations Service would need a high level of training and experience in engineering. However, a list such as this can be made up for a State and can serve as a first draft of a more complete and accurate list of position titles and descriptions.

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<sup>1</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1962," United States Government Printing Office: 1962, p. 19.

<sup>2</sup> "New York State Dictionary of Civil Defense Occupational Titles and Codes," New York State Civil Defense Commission, July 1, 1956; Volume I: v+76 pp.; Volume II: ii+418 pp.

State  
wide  
emergency  
manning

A small number of groups within the State are manning on the preparatory time phase at least with duty officers on a standby basis. It is required that these officers be constantly available. They make up a small staff in professional, administrative, technical, clerical, and other fields. In this time phase, except for these duty officers, the various civil defense groups in the State are in various stages of development with respect to the attainment of a fully manned organization. However, in an emergency or natural disaster, it should be possible because of pre-established assignments to bring the entire statewide civil defense organization to full manning and operational readiness within as short a time as possible.

Therefore, where warning time before an emergency allows, the following three steps should be taken. First, all of the various civil defense functions should be assigned to specific civil defense government, military, or private groups within the State. Second, the staff of the State Civil Defense Agency should be actually employed. These two steps should be emphasized in the preparatory time phase. Third, in the critical tension time phase, the civil defense organization

Assignment  
steps

should be fully manned. Also where time between emergencies allows, it may be necessary to repeat any or all of these steps in the reconstruction time phase.

The assignment of the various civil defense functional areas or missions to various groups within the State is usually formed on the State and county levels, that is, at these levels, the various civil defense organizational groups are made up largely of government employees with comparatively few non-paid volunteers. At local levels, civil defense groups consist largely of volunteers. Volunteers are used exclusively for mobile support units, survival units, members of rescue units, fire and police auxiliaries, and the like, therefore, for such volunteer groups specific statements should be provided in the State civil defense law as to their duties and as to the manner in which they may be assigned to and removed from duty. For formally employed personnel within the State Civil Defense Agency, the Director is authorized to perform or have performed the usual related functions, such as to innovate or add and change position descriptions, to fix compensations consistent with appropriations, and to prepare duty assignments and schedules. Where certain civil defense functions or missions have been assigned to departments or agencies

other than the State Civil Defense Agency within the State Government, the administrative head of each department or agency performs or has performed such function with respect to civil defense duties as he normally does with respect to the normal government duties of the personnel involved. Specific and full time civil defense assignments may be made not only for the staff of the State Civil Defense Agency but also for Chiefs of State Civil Defense Services and the Chiefs of critical sections with certain services.

The Director, acting for the Governor, may make these assignments. Such appointments may, like certain other State Government appointments, carry specific limitations. It may be required, for example, that the person appointed be a citizen of the United States or be a resident of the State for a specified time such as five years. Further, the term of the appointment may be limited, for example, to four years.

The criteria for assigning civil defense functions to specific groups are complex, but they may be summarized as follows: to make maximum practicable use of the existing resources of government and private agencies within the State, in accordance with State law, where the term resources

Assignment criteria

includes facilities, services, equipment, supplies and personnel.

These assignments at the State level are made as part of the  
State civil defense plan and the assignment makes the group  
accepting the assignment responsible for carrying out the  
stated civil defense emergency functions or missions as a  
specific State Civil Defense Service or in support of a specific  
Service. The assignments are made, accepted, and carried  
out in an analogous manner at levels below the State level, the  
levels involved varying for each service according to need.

The manner in which civil defense assignments have  
been made at the Federal level is described in the following  
quotations from the 1962 Annual Report of the Office of Civil  
Defense:<sup>1</sup>

Federal  
assignme

Executive Order 10952 (effective August 1, 1961) assigned major civil defense responsibilities to the Department of Defense. It also provided that the Director, Office of Emergency Planning, would advise and assist the President in connection with the total civil defense program and would be responsible for the continuity of government programs at the Federal, State and local levels.

Executive Order 10958 assigned certain civil defense responsibilities with respect to food and medical stockpiles to the Secretaries of Agriculture and Health, Education, and Welfare, respectively.

In February 1962, nine Executive Orders

(10997-11000) which replaced previous emergency preparedness orders were signed by the President. They generally prescribe the emergency preparedness functions of the several departments and agencies under all emergency conditions. To a limited degree, these Executive orders include civil defense functions. The activities involved are closely related to the normal functions performed by the departments and agencies. These civil defense activities must be carried out in consonance with national civil defense plans, programs and operations of the Secretary of Defense.

The Department of Defense is achieving the necessary coordination of the civil defense activities performed by the other departments and agencies through the use of contractual arrangements with them. However, the Office of Civil Defense does not fund the functions performed by these agencies under these Executive orders.

The Office of Civil Defense, however, has entered into certain contractual arrangements with other departments and agencies to use their special competence in assisting the Office of Civil Defense to perform its functions under Executive Order 10952. Examples of such action include compilation of damage assessment data and research projects. Improvements have been made in defining the desired product and in relating actual performance to the funds expended.

The new civil defense program was strengthened and given impetus by the use of DOD resources. In fiscal year 1962, this was evident in several areas of operation:

1. As explained in Part III, the Army Corps of engineers and the Navy Bureau of Yards and Docks are carrying out the basic portion of the National Shelter Program. They are also being used in other areas of shelter program operations.

2. The Defense Supply Agency manages the logistics of OCD supplies. This includes procurement, receipt, storage, and issuance to State and local governments of all shelter supplies, and management of emergency equipment and supplies for State and local governments.

3. Preparations were completed for the Defense Communications Agency to take over civil defense communications early in fiscal year 1963. (See Communications, Part IV.)

4. Printing and distribution of all OCD publications were taken over by the Adjutant General's Office of the Army.

5. Legal services and legislative liaison are furnished to OCD by the General Counsel of the Department of Defense and the Assistant to the Secretary of Defense (Legislative Affairs).

6. Although OCD has a public information program closely coordinated with its training and education and other programs (see Public Information in Part VII), the Office of the Assistant Secretary of Defense (Public Affairs) continues to perform certain civil defense public information functions. This arrangement assures full coordination of public information common to both military and nonmilitary programs.

7. In developing damage assessment, warning, shelter, and other civil defense systems, OCD has significant assistance from DOD specialized services such as the Defense Atomic Support Agency and the Weapons System Evaluation Group, which provide means for broad-based and continuing evaluations of emergency conditions with which civil defense is designed to cope. With data from these sources, the OCD staff can determine the adequacy of its operational plans.

8. Among the functions assigned to the Secretary of Defense by Executive Order 10952 is that of

providing emergency assistance to State and local governments in a postattack period, including water, debris clearance, fire, health, traffic, police, and evacuation capabilities. The military services, being the major means of operations available to the DOD, would necessarily be relied upon to provide such assistance, and the Military Departments are helping to plan for this purpose. The Secretary of Defense has approved recommendations to award retirement point credit to Standby Reserve officers for participation in State and local civil defense work. Additional recommendations for military assistance to State and local governments in postattack operations are being prepared.

It is not possible to prescribe the specific State departments or agencies that should be assigned with specific civil defense functions, either as an analogy of Federal level assignments or as a model applicable to all States, since the States vary so widely in their existing organizational structure.

To suggest possibilities, however, the table presented in the "Instructor's Guide" summarizes statements made in the civil defense publications of seven States as to the groups to whom various civil defense functional areas have been assigned. This table indicates for a given functional area what civil defense, government, military, and private groups have received the following assignments: (1) major responsibility for the functionally corresponding State Civil Defense Service; (2) responsibility for providing the Chief of the specific Service; (3) responsibility for

Examples of specific assignments

providing all or some of the specific Service staff; (4) responsibility for providing support to the specific service, insofar as the resources and circumstances of the group permit.

This same table could be expanded to indicate other types of relationship than this relationship of mission assignment between the State civil defense organization and the government, military, and private organizations within the State. This type of table made up for a specific State for different types of relationships would allow a rapid review of the many types of relationships that must exist between civil defense and other groups within the State. For example, such tables might be drawn up to indicate, for each State Civil Defense Service, the government, military, and private groups within the State which normally perform activities related to those assigned to the Service, thus, indicating to the Service what different groups must be coordinated during emergency operations involving each type of activity.

For all such tables, the civil defense organization could plot out its over-all relationships with any group within the State. By this means, groups that have not been integrated in any manner or in some specific manner into the civil defense

Examples of related grou

plans of the State would be pointed out. Also, duplications would be clear. Such groups, whether government, military, or private, are referred to in the following lessons as "related groups." To indicate the complexity between States in the naming of such groups, all such groups named for the seven States reviewed are listed in the "Instructor's Guide" as examples of related groups.

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<sup>1</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1962," United States Government Printing Office: 1962, pp. 21-14.

## Continuity of Government

2A  
Definition  
procedures

The critical responsibility for insuring continuity of government, of course, lies with the State Legislature. This responsibility is properly carried out through State statutes that adequately define and provide delegated responsibilities for continuity of the State Government in emergencies.

Responsibility  
for State law

The State Civil Defense Agency, as an agency within the Executive Branch of the State Government, shares this delegated responsibility with other groups within the government and is responsible for programming specific continuity of government programs for the civil defense organization within the State. The most important of these programs involve establishing lines of succession within the organization, preserving records essential to the continued operation of the organization, and establishing emergency operating sites for the control of the organization.

Programming  
for civil  
defense

The programming of continuity of government will be carried out within each State Civil Defense Service in a manner similar to that required for the State Civil Defense Agency acting for the civil defense organization as a whole. This intraservice programming involves not only the Service, per se, but also the Service in relationship to the specific

Programming  
for each  
Service

governmental, military, or private groups that are operationally related to it, either because the group has been assigned to act as this Service in an emergency or because the group has been assigned to support the Service in providing emergency personnel and other resources. A table of examples of such relationships was presented in the first lesson.

The essential task in such programming is to conduct a continuing analysis of the normal functions of the related groups and of the assigned civil defense functions of the civil defense Service in order to integrate these two sets of functions in an emergency according to the State civil defense plan and in accordance with the intents and purposes of relevant State laws.

Some of this programming can be carried out before an emergency and stated in plans as automatic emergency actions. These automatic emergency actions may state specific functions that must be continued in an emergency because they are essential or because their continuation is required by State law. These automatic actions may specify other specific functions that must,

Analyzing  
normal and  
emergency  
functions

Automatic  
emergency  
actions

in an emergency, be suspended or deferred. Much of the pre-emergency planning can be devoted to modifying the related group's normal functions or normal operating methods to permit flexible and expeditious integration with the assigned civil defense functions under anticipated emergency conditions.

Actual emergency conditions as they occur will require, however, further prudent judgment as to the manner of carrying out this integration. The making of such judgments can be expedited by continued liaison between the civil defense and other groups involved. Specifically, the related groups may provide representatives in the State to local level headquarters of the Civil Defense Service to assist in this integration of functions.

It will be essential to make clear what group is in authority. Usually, operations will remain under the existing management and control of the related group but judgment as to emergency integration of operations are best made by the civil defense group.

Actual  
emergency  
conditions

Clarification  
of  
emergency  
authority

The statutes of the State provide for an emergency succession within the Executive Branch by naming successors to the Governor and state procedures by which successors in the Judicial and Legislative Branches are to be selected. In a similar manner, the State Civil Defense Agency and Services establish their own lines of succession.

Establishing  
lines of  
succession

Within the State Civil Defense Agency, the line of succession to the post, powers, and duties of the Director should be specified as a predetermined list of titles in specified order. For example, it may be stated that the following organizational positions, in the stated order, are to act for the Director in his absence, according to established policies: Deputy Director, Plans and Operations Officer, and Communications and Warning Officer. Certain other positions within the State Civil Defense Agency should have associated lines of succession; for example, specific lines of succession should be stated for those staff members who are assigned to the State civil defense emergency operating center.

For  
Agency

Lines of succession within each Service should be developed and published as standard operating procedures by the chief, at least at the State, district, and area levels.

Copies should be filed at all times at civil defense emergency operating centers, at least from the State to the operational area levels. These succession procedures should be reviewed not less than twice yearly or as needed and should be revised or updated so that they are kept current.

The organizational positions for which alternates or successors are named include the chiefs and the chiefs of sections at State to local levels. Also, alternates should be named for key persons within the Service's staff at State to local levels.

The line of succession for each organizational position would be of a certain number of alternates, stated by order and title, with name and civil defense training status of alternates noted.

Each line of succession should state the circumstances of succession, which circumstances would usually consist of the absence, unavailability, or incapacitation of the person succeeded.

Succession may also proceed upon the command of the person succeeded as a manner of naming alter-

For  
each  
Service

Form

nates to act during two of the three eight-hour shifts during 24-hour basis operations. A general statement should be included that the alternate will be the most senior in command at the time unless otherwise stipulated.

The assignment to civil defense of some of the responsibilities for continuity of government implies that various civil defense groups will take specialized related actions. One of these specifications involved in preserving continuity of government is providing for the personal security of the Governor and his successors. This action may be implemented by the State Civil Defense Police Service in its assignment of certain of its staff to perform this duty, especially during the post-attack time phases.

Protecting  
the Governor

**Provision for actions to preserve essential records**

**Authority**

should be included in State statutes The statutes may specify that these actions are to be taken as thought necessary by the political jurisdictions of the State.

Specific actions to preserve records essential to the continuity of government include, first, stating what official records and record materials are essential to the continued and orderly functioning of government in emergencies.

**Deciding  
what  
records  
are  
essential**

Within civil defense, this is interpretable as deciding what records are essential to the continued operation of the State civil defense emergency operating center. This type of action is most critical in early time phases. Check-off lists of essential records for each element of the civil defense organization would be of considerable assistance in planning for continuity of government.

Second, specific action for record preservation may be required, beginning, at latest, with the attack and shelter time phase and continuing at least through the initial recovery time phase, when salvaging valuable records and evacuating them from damaged areas may take place.

**Salvaging  
and  
evacuating  
records**

Another specialized duty is implied in the assign-

**Searching  
records**

ment to the State Civil Defense Continuity of Government Service of responsibility for essential records. Because of this responsibility, the Continuity of Government Service must be prepared to search and provide reading facilities for the records in its custody. The forms of request for such services should include the manner in which the request is authorized.

A major step in providing for continuity of government  
in an emergency is establishing locations of government.

Authority

This action should be authorized in State law.

This law, also, allows the Legislative Branch to locate  
its own seat of action, the General Assembly, at the normal  
site or at an alternate location; or this action may be taken  
at the discretion of the Governor.

Establishing  
site of  
General  
Assembly

The seat of government and the emergency operating  
center for civil defense are usually the same and share the  
same purpose, the continuity of the government. Normal  
and alternate sites are set up as early as possible in  
planning. However, it may be necessary and advisable  
to state new alternate sites as late as in the initial recov-  
ery time phase. All levels of government within the State  
should take such action to provide a more dependable com-  
mand, control, and communications structure from Federal  
to State to local levels of government.

Establishing  
emergency  
operating  
centers

For each State Civil Defense Service, the analogous  
duty is made more complex by the extent of operations over  
the entire State. Each Service must develop and publish as  
part of the State civil defense plan standard operating pro-

Establishing  
Service  
headquarters  
and other  
locations

cedures to designate specific locations for its State to local level headquarters and other installations, for assembly areas the Service will use, and for its field units. These procedures should be maintained to assure that these installations, areas, and units are available at all times. It may be necessary to review and amend the designation of locations in the critical tension time phase or in the initial recovery time phase.

The Service headquarters and other installations should be located at both normal and alternate sites. Mobile sites may be designated for the use of some Services, as for example the State Civil Defense Fire Service. These mobile sites should include adequate field remote emergency control facilities. Sites are named for installations at each organization level of the Service within the State. The various sites within the State for one Service should be treated as a single system. The geographic sites are specified by the State Civil Defense Agency according to its strategies. The Agency may specify that the Service headquarters be in the State to local civil defense emergency operating

Criteria  
for  
headquarters  
and other  
installations

centers, adjacent to these centers; or, if the Service headquarters are in another location, the Agency may require that the Service maintain radio or telephone contact at all times between Service headquarters and emergency operating centers.

The locations specified for assembly areas and field units will vary for each Service according to its operational requirements. For example, assembly areas are often located on or near controlled egress routes.

The establishment of Service installations requires the detailed stating of the resources required for the installations. These requirements should be stated separately for pre-emergency time phases and for emergency time phases. Requirements may be stated of minimum emergency resources needed for a specified elapsed time of operations, such as for one week. Requirements may, also, be stated for installation evacuation, i.e., the resources that will be taken to the alternate site of the installation.

The following types of resources requirements are involved. Operating records will be required, including, for some Services, statutes, seals, maps, charts, files, mutual aid plans, and other Service records. Require-

**Criteria  
for  
assembly  
areas and  
field units**

**Resources  
required  
for  
installations**

**Types of  
resources  
required**

ments for office supplies and equipment, such as typewriters, office machines, filing cabinets, forms, paper. Some Services will require specific apparatus and instruments. Usually, the staff of a Service reserves certain instruments for their own use. Power may be required for machines. Communications requirements should be stated and described by persons who must be reached, radio call signs, and the like. Communications may be fixed or mobile, including mobile radio base stations, repeater stations, portable generators, with the frequency of operation stated. Transportation requirements are important, especially for evacuating installations to their alternate sites. For this possibility, transportation requirements should be stated according to weight and volume and the statement of these requirements should be coordinated with the chief of the State Civil Defense Transportation Service. Finally, personnel requirements should be stated at least generally and according to the approved organizational tables of the Service. Detailed personnel requirements can be expected to vary with local

control site  
procedures

situations. All personnel included in this statement should be on a 24-hour immediate activation basis with the State to local level chiefs of the Service, at the appropriate level.

Without pre-established protected installations,  
each Service should at least plan to be able to improve the  
radiological protection of its personnel and equipment  
wherever they are operating in the event moving from a fallout area is not feasible. However, to the extent possible, such protected facilities should be set up in the pre-emergency time phases. Protected sites are necessary for civil defense operations at all levels.

Improving  
Service  
personnel  
and  
equipment  
protection

The Protected Facilities Program of the Office of Civil Defense emphasizes protected control centers for the  
eight Office of Civil Defense regional offices. One of these, in Region 5, Denton, Texas, has been completed. Funds for a second, in Region 1, were appropriated in fiscal year 1962. Funds for the remaining six are to be included in future budget requests.

Administering  
Protected  
Facilities  
Program

Federal funds are available for accelerating the planning and the construction of protected emergency oper-

ating centers at the State, county, and local levels. Of these, at the end of fiscal year 1962, seven State, twelve county, and nine city protected emergency operating centers were completed; twenty-five were under construction; and forty-two were planned.

Under this program, funds may be made available in the future for protected installations for the control of emergency operations in geographical sectors with concentrations of shelters and people. Further, proposals are being heard for providing, in the future, funds to improve the operational capabilities of these protected facilities by insuring water, power, and similar essential resources.

Effective response to warning is, of course, a primary requirement in achieving centralized control of emergency operations and, therefore, in achieving continuity of government.

Relationship to control and continuity

To the extent that the operational situation at and shortly after warning can be anticipated, response to warning can be pre-planned as standard operating procedures or automatic actions. Such actions must, of course, be rapid. They must, also, however, be prudent and appropriate. When both of these requirements can be met, the State Civil Defense Agency should, in the pre-emergency time phases, establish lists of programmed automatic actions for the entire State and assign these actions as instructions to all elements of the civil defense system within the State. The actions described should include mobilization, mobilization points, and individual duties at mobilization. Detailed guidance in establishing such actions should be obtained from the Federal and regional offices of the Office of Civil Defense. When lists of programmed automatic actions for the entire State are established, copies should be supplied to the Federal and regional Office of Civil De-

Prescribing automatic actions for State

fense offices.

Each State Civil Defense Service will need to provide before warning more detailed and definite mobilization standard operating procedures for the Service at all levels within the State, including chiefs, staff, and auxiliaries, and, for some Services, including related groups, for example, the Civil Air Patrol as a group related to the Air Section of the State Civil Defense Transportation Service. The chief of the Service is responsible for preparing and publishing such procedures and for keeping them current.

In doing this, he should coordinate the procedures with the procedures of State, County, and Local Civil Defense Agencies, of chiefs of the Service at levels below the State level, and of related groups.

The standard operating procedures for mobilizing the Service should include the procedures for the following actions to warning. Procedures should be stated for alerting all personnel within the Service, especially for alerting key staff members. Alerting may be by means of fanout schemes. Alerting lists should be set up for personnel and their alternates according to their names, phone numbers, and addresses. Procedures should also,

Establishing mobilization procedures in each Service

Actions specified

be stated for assigning mobilization locations, as assembly or rendezvous points in specific assembly areas. Finally, procedures should be stated for mobilizing all equipment.

The main criteria to be considered in preparing Criteria  
mobilization procedures are, first, that the stated actions  
to warning will make the Service capable of operating  
throughout the State and, second, that the procedures  
when prepared be available for ready reference. The pro-  
cedures may be published as part of the Service's annex in  
the State civil defense plan.

2B  
Proclamation  
of emergency

At the State level, the official declaration of a state of emergency is made by the Governor's proclamation. He, also, officially, by proclamation, terminates a state of emergency.

Authority

For such proclamations to have full legal status, it is necessary that the State legislature authorize or concur in the proclamation. When the proclamation of a state of emergency is due to enemy attack, the State law concurring in the proclamation is special, stated to facilitate and increase the effectiveness of emergency civil defense operations throughout the State. When the emergency is due to a major natural disaster, the State law authorizing the proclamation of a state of emergency is designed to warrant receipt by the State of Federal disaster assistance to supplement the efforts and available resources of the State and its counties and cities and to alleviate damage, hardship, and suffering.

Legislative concurrence

The State Civil Defense Agency, upon receiving authoritative warning, officially calls State to local levels of the civil defense organization to duty and mobilizes the civil defense organization to carry out its emergency civil defense operations throughout the State.

Official alerting

The decision as to what proportion and which elements of the entire organization to mobilize is left to the discretion of the Director. The minimum mobilization usually consists of alerting the chiefs of the State Civil Defense Services and alerting a skeleton force of the State Civil Defense Agency staff for operations on a 24-hour basis at the State emergency operating center.

Extent of mobilization

It should be noted that the time-phasing and the criticality of this procedure are different for warning due to an emergency as compared to warning due to a major disaster such as a flood.

When the chief of each State Civil Defense Service receives authoritative warning, he may, at his discretion, order the implementation of the Service's pre-established standard operating procedures for mobilization of the Service. By these procedures, at least a skeleton force of the Service's staff will be requested

Alerting in each Service

to proceed to the State headquarters of the Service. All ele-  
ments of the Service, including off-duty personnel, will be  
notified at least to maintain a state of increased readiness  
and to go onto a 24-hour standby basis. In a full imple-  
mentation situation, all elements will immediately be placed  
on duty, according to their assignments. Those personnel  
who have been placed on duty will prepare for their assigned  
emergency operations.

2B  
Control site  
activation  
procedures

Staff mobilization is complete when all assigned personnel are located at their respectively assigned emergency locations. In this context, the next step is the mobilization of the installations, per se, and the continuing operation of these installations as long as they are needed.

Criteria

Within the State, the State to local emergency operating centers form the kernel of this procedure of activating installations. It is most critical that they be activated.

Activating  
emergency  
operating  
centers

They remain activated a longer period than the other installations, at least, from the critical tension time phase through the initial recovery time phase. They are activated either upon warning of attack or upon warning of natural disaster.

Each State Civil Defense Service provides liaison personnel on a continuous 24-hour basis at State to local emergency operating centers when civil defense is operational. This representation is either the chief of the Service or a person empowered to act for him.

Providing  
Service  
representation  
at centers

Each Service similarly activates its headquarters, other installations, and assembly areas throughout the State. Each person in the service is ordered by the chief

Activating  
Service  
headquarters,  
installations,  
and assembly  
areas

or assistant chief of the Service to assemble at his respective pre-assigned duty station immediately, or as soon as possible, consistent with the situation and available transportation resources.

Some personnel will report to State to local emergency operating centers. Others will report to the normal sites of the Service headquarters throughout the State.

Duty stations

They will ready the Service headquarters for operations and maintain them in an operational state as practical and essential. Certain personnel will proceed directly to the alternate sites of the Service headquarters, for example, off-duty personnel may be so directed. Other personnel will report directly to mobile headquarters sites.

Pre-assigned elements of the Service will report to pre-designated assembly areas, to prepare for post-attack dispatch to carry out their respective assigned emergency field operations. Other elements will report to pre-assigned Service installations and will activate them for emergency operations.

Special mobilization location instructions will be necessary to provide for personnel who are off-duty, are dispersing, are out of contact with their own commands, or

Special location instructions

who for some reason are unable to report to their assigned station. They may, for example, be required to report their location by telephone to the Service chief at their own level or they may be pre-instructed to report to the nearest operating Service headquarters, installation, or assembly area, consistent with the civil defense plan of the locality in which they are at the time. The existence of shelters equipped with adequate communications facilities is essential to full activation since, if service personnel are assembled in a shielded shelter area where they can be contacted, the assignments and, especially, reassessments can be made that will be necessary to full statewide activation of the civil defense organization.

Full mobilization involves more than the assembling of personnel and the activation of facilities. Mobilization of all resources is required. The types of resources to be considered include communications, records, manpower, equipment and supplies, facilities, and transportation. All essential emergency civil defense resources should be mobilized and special attention should be given to critical and specialized technical resources. These resources may be owned and operated by the Service; they may be stockpiled; or they may be made available by the government, military, and private groups related to the Service.

Mobilizing  
resources

Full mobilization of resources includes the final step of insuring that full mobilization has taken place. To insure full mobilization, the status of resources mobilization must be checked by reports obtained from lower levels within the Service and from the chiefs of the various sections of the Service. The information for such reports may be obtained by such procedures as calling personnel rolls or testing equipment. Based upon these reports, available resources may be redistributed to obtain efficient and equitable distribution of resources. Additional resources may

Insuring that  
mobilization  
is complete

be obtainable, especially for elements in damaged areas.

Certain resources may be readily adapted to other uses, as required. Others may be repaired. All distribution and re-distribution of resources should be made according to the criterion of bringing the various elements of the Service to and keeping them at a state of full operational readiness.

Establishing  
relocation  
procedures

The preplanning for relocating headquarters is especially important, since this relocation is likely to take place under adverse conditions. Also, preplanning is critical for literally "lightening" the relocation task by planning to transport only the essential records, supplies and equipment, and personnel. It will be possible to carry out the relocation more rapidly if readily available and up-to-date relocation procedures, which include detailed lists of the essential resources to be included in the relocation, exist.

The task of relocating State to local emergency operating centers and Service headquarters may, if time allows, be broken down into a series of steps. By standard operating procedures for mobilization, certain personnel as a skeleton crew may have proceeded directly to the relocation sites of these facilities to prepare them for emergency operations, should their use become necessary. If time allows and developing conditions make it appear to be advisable, the normal sites of these facilities can continue in operation while certain nonessential resources are being moved to relocation sites. With developing conditions, and when the relocation site is ready for operation, all resources that are

## Relocating

essential to the operation of the relocation site may be transported from the normal to the relocation site, with a rear detachment remaining at the normal site. Finally, this rear detachment may be brought to the location site. To avoid confusion in command and in communications within the Service and with other groups within the civil defense organization, the formal closing of the normal site and opening of the relocation site should be concurrent.

Often relocation will be initiated on short notice when the normal site has become inoperative. Under these circumstances, complete reorganization at the relocation site may not be possible until the initial recovery time phase.

Despite careful preplanning, the pre-established relocation sites may be in damaged areas. Setting new sites for Service headquarters may be according to the criterion of locating them as near as possible to emergency operating centers at the same level.

Under certain emergency conditions, additional resources may be required at the relocation sites, such as food and housing for the staff. Provision should be made for obtaining such support.

Short warning time limits

New relocation sites

Support

The task of relocation cannot be considered completed until notification of its completion has been made to a superior command position. Usually, for each State Civil Defense Service, this notification will be made to the State Civil Defense Director by way of the Service representative at the State emergency operating center. The notification may, also, be made to the area level civil defense coordinator. The content of the notification is that the Service headquarters location change has been completed and that the relocation headquarters has achieved a status of operational readiness.

Notifying  
of relocation  
completion

Achieving centralized control of civil defense operations can be considered as a series of successively time phased tasks, as one task which continues so far as is possible through all time phases, or as discrete authorization, protection, and security tasks to assure centralized control. These three points of view are taken up separately in this and the next two sections.

Alternate points of view

In time phases which clearly do not involve a state of emergency and in which, therefore, emergency civil defense operations are not carried out, centralized control, per se, is not necessary. However, it is necessary to maintain an informal form of centralized control among related groups to keep open the same channels that will be used when centralized control is called for. Therefore, especially during the preparatory time phase and the final recovery time phase, the State Civil Defense Agency and each State Civil Defense Service are required to maintain effective working relationships with all related groups at all levels. The emphasis on the form of this relationship from the Agency to the other groups is executive. The emphasis in the relationship between the Services and

Establishing working relationships

other groups is that the relationship be harmonious and friendly. Circumstances may require that, if such relationships do not exist, they must be established; and, if working relationships are broken off by lack of communications or other reasons, they must be re-established. This first--and last--step in achieving centralized control can be considered to be a maintaining situation rather than a situation of seeking or achieving control. It is a task that is not usually made explicit. It is, however, one of the most critical tasks of the civil defense organization during non-emergency periods. The current civil defense State level staffs devote much of their time to this task. The current status of civil defense can be measured largely in terms of how effectively this task is carried out.

This maintaining task is followed, upon threat or occurrence of attack or natural disaster, with the first step in attempting to achieve centralized control. This step consists of putting into effect the civil defense plans that should be available at State to local levels within the State. This step is most critical in the attack and shelter time phase.

Putting  
plans  
into  
effect

The second step in achieving centralized control  
consists of initiating with all available resources the civil  
defense operations assigned by these plans. Of course, it  
will be necessary to reorganize these operations according  
to the dictates of the situation. This step is critical through-  
out the post-attack time phases.

Initiating  
and  
reorganizing  
operations

The third step in effecting centralized control can be  
achieved only as communications are re-established. Espe-  
cially important, of course, are communications between  
the State, county and local emergency operating centers.  
  
These communications links put into contact the State to  
local Civil Defense Agencies located in their respective  
centers. By means of these contacts, the State Civil De-  
fense Agency can determine what protective and support  
actions are required within the State and can coordinate and  
assist the actions taken. As will be discussed, below, these  
actions are actually carried out by the political jurisdictions  
of the State, who are contacted by their respective Civil  
Defense Agencies. Like the preceding step, this step is  
critical throughout the post-attack time phases, with its em-  
phasis in criticality being slightly later.

Controlling  
actions

If no future attack or natural disaster occurs to re-cycle the time phases and if it is determined in the step, above, that no further protective and support actions are required, the need for centralized control drops out. The civil defense system, then, returns to the informal but important task of maintaining effective relationships among all groups related to civil defense.

Return to  
first  
task

As compared to the successively time phased steps involved in achieving centralized control of civil defense activities, the carrying out of centralized control, per se, can be considered as a task which continues through all time phases, at least when it is possible. This task may be worded as two parallel tasks: first, maintaining liaison with all related groups at all levels; and, second, coordinating and supporting the civil defense activities of all related groups at all levels. However, the first of these two tasks is a means to the end implied in the second of the tasks. At least, for the State Civil Defense Agency, the means and end tasks are so intimately related through the operations of the State emergency operating center, that they are worded as one task. For each State Civil Defense Service, the means-- that is, the task of maintaining liaison with related groups-- may be unusually difficult to achieve. For the Services, therefore, the two tasks are stated separately.

Liaison between related groups is maintained through a system of installations consisting of State to local emergency operating centers, State to local Civil Defense Service headquarters and shelters.

Continuing  
control  
point of  
view

Maintaining  
liaison with  
related groups

The final end of this system is to provide contact with the "front line forces" who actually carry out civil defense protective and support actions. These forces consist of the local political jurisdictions within the State and the individuals responsible to those jurisdictions.

These locally controlled forces deal with the direct and indirect effects of attacks and disasters. The place of shelters in this liaison system is critical. With proper use of shelters, the forces can become the point within the liaison system at which centralized control is converted into protective and support action. The Assistant Secretary of Defense for Civil Defense, Steuart L. Pittman, made the following statement relevant to this point before the House Armed Services Committee on July 11, 1963:<sup>1</sup>

Under attack, the shelter does more than shield from radiation. It is a rallying point from which to organize emergency operations. If putting out small fires with a potential for a large conflagration were to be top priority task in the early stages of an attack at a particular place, shelters would be the staging areas for fire fighting. The radiation detection equipment would permit fire fighters to gauge the amount of exposure they could take and rotate the fire fighting duties to avoid

Liaison  
with  
"front line  
forces"

Continuing  
control  
procedures

an overdose. Later the shelter would be the staging area for decontamination work and for restoration of essential utilities and other emergency tasks. Still later the shelter area would be a logical location for mass feeding and casualty care, for housing the homeless, for keeping the exposure of children to residual radiation to an absolute minimum in areas of heavy contamination.

The core of the civil defense liaison system is, of course, the group of State to local emergency operating centers. This system is extended to analogous installations at the Regional and the Federal levels.

Coordinating operations

All plans and operations relating to emergency operating centers within the State are aimed at the criterion of allowing these centers to operate efficiently and continuously, thus making unbroken centralized control possible. In planning, specific procedures, policies, and regulations regarding all aspects of emergency operating center operations must be formulated and announced.

Criteria

The various State Civil Defense Services must carry out their activities in compliance with these regulations. These regulations will be needed in all fields, including in areas of internal operations, such as administrative,

personnel, and office procedures, and in areas of external operations such as providing technical support to other emergency operating centers and to the various Service headquarters. This technical support may include providing work space, communications facilities, and required liaison.

The particular sets of related groups involved in these comments could be presented on the same table as was used in the first lesson to demonstrate the relationships discussed there. These operational relationships are necessary to provide the team approach to each of the functional areas of civil defense that will be required by severe damage due to nuclear attack, dispersal problems, and the like, and to avoid interference between operations within one functional area and other essential operations. Coordination of operations within one functional area implies, of course, that the various related groups were coordinated in planning as well as in operations. Where groups are to be related in operations in one functional area, it is advised

Related groups

able that plans for this functional area be prepared jointly by the related groups.

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- 1 "Closing Statement, The Honorable Steuart L. Pittman, Assistant Secretary of Defense (Civil Defense), before Subcommittee No. 3 of The House Armed Services Committee, House of Representatives, July 11, 1963," pp. 13-14.

Some of the discrete tasks that may be carried out within the civil defense organization to maintain centralized control, are discussed below. Certain tasks are related to the orderly passing of authority from the normal to the emergency government. Certain tasks emphasize protection. Other tasks involve maintaining the security of centralized control.

Types of discrete control tasks

In effecting centralized control in an emergency persons in specific positions within the State Civil Defense Agency and Services may automatically be authorized to assume the performance of the duties of specific governmental positions, except for duties and powers specifically reserved by State law to the governmental positions. For example, the chief of the State Civil Defense Fire Service may automatically in an emergency possess the powers of the State Fire Marshall. When such shifts in authority are planned, they must be specified in State civil defense plans to make clear the lines of authority that can be expected when centralized control is effected.

Authorization tasks

It may be required that persons in certain civil defense positions submit signature cards as an author-

ization measure. For example, persons within the State Civil Defense Procurement Service who will sign State procurement forms may be provided with signature cards by the State Civil Defense Agency. These persons must complete and submit these cards to appropriate district or area level civil defense coordinators before a state of emergency.

When any civil defense personnel, carrying out their duties, will contact the public or will be required to enter secured installations or cross into restricted areas, they may be required to wear or carry official identification. This may be in the form of uniforms, helmets, patches, arm bands, or badges. This identification requirement will be more useful in promoting unambiguous and rapid identification of officially authorized persons if one form of identification is used for all personnel of all civil defense, governmental, military, and private groups who may be concerned with civil defense emergency operations anywhere within the State or in neighboring States.

An aspect of control that is critical throughout emergency time phases involves protecting, safeguarding, and conserving the resources of each Service. These resources include personnel, supplies and equipment, vehi-

Protection tasks

cles, and facilities. This task is particularly important for resources that are critical and are necessary for the operations of the Service or for the operations of other Services.

The action taken by the Service may consist of avoiding waste by enforcing civil defense conservation instructions. Another action relevant to this task involves protection of the resources from waste or damage due to fire, water, or other elements. The action taken may consist of safeguarding the Service's resources from damage or loss by theft, sabotage, looting, illegal diversion, or misappropriation.

When the Service does not have the means of performing this task, it may request the State Civil Defense Police Service to perform the task.

A security measure that must be taken before an emergency is obtaining formal security clearance for certain persons, especially those assigned with intelligence duties.

Security tasks

Security measures may be taken by the Agency or Services as appropriate precautions to protect their re-

spective centralized control installation against sabotage or related threats. Such measures may be taken only during emergency operations. They may be intensified in the critical tension and the attack and shelter time phases. When such measures are taken and an installation is secured, it is the responsibility of the emergency operating center officer or the chief of the State Civil Defense Service to declare the area secured.

The actual security measures taken may consist of establishing entrance security check points and posting guards at these check points.

Control of civil defense air traffic as a task emphasizes security criteria rather than traffic control criteria because of the important legal relationships with Federal government and military groups involved in carrying out the task.

Controlling the available operational air transportation resources of the Civil Air Patrol and of the transportation industries within the State aims to conserve these resources for use in emergency civil defense missions.

As a security task, this control involves, beginning with the critical tension time phase, assuring air traffic security by identifying all aircraft and pilots and regulating or clearing all flights. The identification, regulation, and clearance procedures must be in accordance with the procedures of the State Department of Aviation, the Federal Aviation Agency, and the Air Force. Certain non-automatic procedures may be involved during the emergency as necessitated by the prevailing situation. All procedure must be in accordance with previously established plans and priorities and in accordance with the current situation and capabilities. This control must be carried out on a 24-hour basis through assigned control airports staffed with air and ground crews.

R e s e a r c h

Research "... to provide balance and perspective for long-range development of civil defense"<sup>1</sup> has been made a major aspect of civil defense actions at the Federal level.

The research program of the Office of Civil Defense was reorganized and expanded in fiscal year 1962 to emphasize the following objectives:

"(1) Identify and develop more economical hardware and operational procedures for civil defense, (2) improve effectiveness of civil defense systems, (3) increase capability of men and machines for postattack operations, (4) improve readiness of the entire civil defense program, and (5) provide more useful data for making basic decisions in planning and operating civil defense programs." <sup>2</sup>

The functional categories in which research operations are organized are listed (in the Instructor's Guide) to indicate some of the specific types of research results that are becoming available to civil defense. As these results become available to the State, it can be expected that increasingly clear guidance will be available in these specialized areas, at least, for improving State civil defense plans and operations.

Federal  
research  
objectives

State research  
objectives

At the State level, it may be difficult because of lack of funds to conduct formal research. The research activity at the Federal level is, of course, aimed at meeting the anticipated research needs of the State. With the supplement of this Federal guidance, the State's research activity can emphasize the less costly and less formal types of research. For example, an officer within the State Civil Defense Agency, perhaps, the plans and operations officer, may be made responsible for periodically conferring with all major civil defense, government, military, and private groups within the State in order to develop and update the objectives of the State's civil defense program and in order to assess periodically the situations within the State which can affect that program. This same officer may be responsible for keeping abreast of specific research results available from Federally sponsored research. A most important duty of this officer would be to insure that all elements of the civil defense organization within the State cooperate fully in Federal research projects when they are requested to do so. Much Federal research requires close contact with State civil defense personnel to gather information, to partic-

ipate in tests of the applicability of the research to the State's needs, and to review research results on the basis of the experience of the State personnel. By this means, a State can, with its current facilities, maintain a research competency in the specialized fields of civil defense and can, therefore, maintain the currency of its State civil defense plan.

This State effort should be supplemented from within the State as well as from the Federal level. Each specialized State Civil Defense Service is responsible for a similar research effort within its assigned specialized field.

Each Service must effectively estimate what its emergency requirements will be. Such an estimate is in advance of known needs, that is, it is not a catalogue of requests received but is an assessment of what requests will be received during an emergency or during operations. The form in which this estimate is expressed will vary with the different Services. For example, the State Civil Defense Fire Service should maintain a current list of critical installations within the State, as a guide to its emergency

State  
research  
in specific  
fields

Estimation  
of specific  
requirements

fire control operations. Similarly, the State Civil Defense Rescue Service will maintain maps and plans of mines in the State. The fiscal and supply officer within the State Civil Defense Agency may maintain a detailed estimate of the fiscal and supply needs of all civil defense and related groups within the State.

Also, each specialized Service or specialized technical officer would be expected to assist the State Civil Defense Agency in evaluating the technical methods, systems, and equipment related to its own operations and in participating in research and development aimed at improving its own methods, systems, and equipment. Federal guidance may be available on such technical questions. However, the specialized officer or Service in the State will need to adapt this guidance to the special requirements of the State. For example, Federal specifications for acceptable home shelters are now available. The shelter officer in the State Civil Defense Agency may simply pass on this information to the public; but he may, himself, supplement this information with special information on which of the acceptable shelter designs are most suitable to the existing build-

Evaluation  
of specific  
methods  
and partic-  
ipation in  
specific  
research

ings or to the available and inexpensive construction materials within the State.

As in all research and development--whether at the Federal or State level, and whether general or specialized--  
the aim of research conducted by each State Civil Defense Service is to develop explicit objectives and standards for its own civil defense plans. For example, the State Civil Defense Training Service should develop training standards for the State. These standards should be stated as detailed objectives, including such specific plans as training of named positions or persons in stated numbers in specific functional areas of civil defense within a predetermined time by selected training methods.

Specific  
research  
objectives

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<sup>1</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1962," United States Government Printing Office: 1962, p. 3.

<sup>2</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1963," United States Government Printing Office: 1963, p. 81.

In setting up the objectives that must be met by the State civil defense plan, research in specialized areas of civil defense will clarify specialized objectives and will assess specialized methods for achieving these departmentalized objectives. However, it is necessary, also, to state the general civil defense objectives in order to provide a full set of bases for the State civil defense plan. In summary, these general objectives include the threats that the State is subject to, the resources available to the State to meet these threats, the population of the State-- both as a resource and as the group to be protected from the threat--and the manner in which different areas within the State can act to meet these threats, with these resources, to protect this population. On the Federal level, the stating of these general objectives has been interpreted as a pre-attack intelligence task, which includes as an integral part of the task providing guidance to the States. The form of the Federal guidance to the States will be discussed in the lesson concerning intelligence. Only the need for such guidance is discussed here.

The threats that may affect the State may be stated separately for natural disasters and for enemy-caused emergencies. The Federal Civil Defense Act, per se, does not cover the threat of natural disaster, although under the Disaster Relief Act Federal aid is available to the States in natural disasters through the Office of Emergency Planning. The Assistant Secretary of Defense for Civil Defense made the following statement before Subcommittee No. 3 of the House Armed Services Committee on July 10, 1963:

It would be a mistake to allow the main purpose of civil defense in America to be diluted by an excessive emphasis on natural disasters. However, it also would be a mistake to overlook the opportunity of making our civil defense structure highly effective against storms, fires, earthquakes and floods. 1

Hurricanes have reached the Atlantic and Gulf coasts of the United States on an average of about two a year over the last decade. Tornadoes have averaged around 600 per year. Floods continue to be an annual threat in many areas of the United States. Fires continue to ravage wide areas of our more combustible woodlands.

These natural forces of destruction are, within limits, not unlike some of the effects of nuclear weapons. Hurricane Carla delivered winds of over 150 miles per hour and raised the tides on the Texas coast over 18 feet. 97% of the homes in Texas City were flooded--the dam-

age was far greater than the famous 1947 explosion which partially destroyed that city.

The blast of a nuclear explosion creates damage comparable to a hurricane or tornado at certain distances from ground zero. Although natural disasters do not begin to compare with the devastation of nuclear weapons, emergency operations of local governments and the organization of emergency military support calls for the type of action which could be used in some locations for both types of disasters. There is a common problem of preparing and organizing for emergency operations, using all elements of organized government, the police, the volunteer firemen, the National Guard, supporting regular military units, the Red Cross, emergency communications, emergency power.<sup>2</sup>

These comments emphasize the importance of planning for the threat of natural disasters, at least in those States where the civil defense law includes these contingencies as the proper concern of the civil defense organization and in those States where unusual numbers of extreme types of natural disaster can be expected due to local conditions.

A related type of threat which may affect some States is not "natural" but is similar in effect, that is, the likelihood of wrecks or major explosions. Such threats, too, may be treated as an element to be considered in civil defense planning, where they are likely and where State law allows.

Natural disasters from State viewpoint

Other types of disaster

Another marginal type of threat includes accidents which involve or may involve radioactive materials. The State law and the State civil defense plans should clarify the role of the civil defense organization in such accidents.

Radioactive materials accidents

The type of threat with which the civil defense plan is most concerned is, of course, the means of enemy attack which may affect the State. The plan should consider not only attacks which may occur within the State but those that occur in other States with indirect effects upon the State.

Means of attack

For example, certain States may have relatively few critical installations or population concentrations to attract attack, but they may expect to support neighboring States who can expect attack. The consideration of enemy attack should include various types of attack and various types of secondary effects of attack. The State should specify the types of attack it could expect and for which it is, therefore, planning civil defense operations. Attack may be not only radiological. Attack means may include psychological attack or outright sabotage. No State is equipped with the intelligence systems required to weigh the relative likelihood of these and other types of

attack. Its plan in this respect--a major respect--can be adequate, therefore, only to the extent to which the State is supplied by the Office of Civil Defense with detailed and current intelligence in terms of the forms of attack that may affect the particular State, the relative probability of the different forms of attack, and the best and most appropriate operations which the civil defense organization should plan to conduct.

Each State can set up realistic plans only if it has available current and accurate estimates of the resources and the population with which it will deal during an emergency. The aim of such surveys is to make the most efficient possible use of existing resources within the State or resources available to the State in protecting as many as possible of the State's population. These data may be available within the State, at least for the governmental organizations. Data must be obtained also for private and military organizations. Of course, the civil defense organization must maintain estimates of its own emergency resources. The cost of maintaining such resources and population estimates may be prohibitive for many State civil defense organizations. Again, therefore, in this area Federal guidance is needed.

Resources  
and  
population

If it can be assumed that the State with Federal guidance has stated its planning objectives in terms of threats, resources, and population, the next step would be to map the State, as a basis for the State civil defense plan, in terms of the emergency operations that different areas of the State should plan to perform. In this activity, also, Federal guidance will be needed as to the form and content of mapping that is recommended as most suitable. For example, planning for operations in rural areas as opposed to urban areas is a subject concerning which Federal guidance is needed. The aim of such mapping, regardless of the particular form used, is to facilitate direction and control by the State Civil Defense Agency or emergency operating center of emergency civil defense operations by the "front line forces" throughout the State. Of course, such mapping serves as guidance from the State to its county and local Civil Defense Agencies, to indicate to each such Agency the type of operation that it should emphasize in its planning.

The form of this operational mapping of the State may

Form of mapping

be a functionally classified counties map, published in the State civil defense plan, showing those geographical locations that are likely in an emergency to have to emphasize operations for the protection of life and property within their respective areas and those geographical locations that are likely in an emergency to emphasize operations of rendering all possible assistance and support to other specified areas. It should be made clear in this mapping that all areas will need to consider certain basic operations, such as communications, warning, and shelter. No form of mapping should be allowed to obscure the possibility that the predictions as to threats, resources, and population may prove to be different from the actual situation when the emergency occurs. In other words, although certain areas may emphasize certain operations in their plans, all areas should provide some planned basis for any type of operation that may be required in any eventuality. This last point is obvious in the country's experience with natural disasters, in which the effects are more devastating when the natural disasters have not been expected and planned for.

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<sup>1</sup> "Supplemental Statement on Natural Disasters, The Honorable Steuart L. Pittman, Assistant Secretary of Defense (Civil Defense), before Subcommittee No. 3 of the House Armed Services Committee, House of Representatives, July 10, 1963," p. 4.

<sup>2</sup> Ibid., pp. 1-2.

## Planning

63  
Step 1  
Planning

Planning for civil defense can be considered as four discrete tasks: preparation of plans, assistance to other groups in their preparation of plans, coordination of the prepared plans of related groups, and official or final review and acceptance of plans of related groups.

Four steps

These tasks are discussed, below, both as tasks performed by the Agency and as tasks performed by each Service, to illustrate the criteria that may be applied in civil defense planning.

Over-all  
versus  
specific  
plans

The primary responsibility for preparing civil defense plans for the State in all areas of civil defense is, of course, placed with the State Civil Defense Agency. The actual task of preparing plans in the various functional fields of civil defense is the primary responsibility of the various State Civil Defense Services, according to the assignment of particular functional areas to particular Services.

For the Agency or the Services, this task continues through all time phases as a relatively critical task, with the criticality decreasing during emergency operations and increasing again as the reconstruction time phase is entered.

This continuing criticality of a task that, at first consideration, might be considered a task confined to the preparatory time phase is, of course, due to the essential requirement that the plans be complete and current. This requirement carries the implication that an integral part of planning is the periodic review and revision of plans to keep abreast with changing basic assumptions derived from the research discussed above. For example, changes in warfare and defense techniques may require revision of plans.

The task of preparing plans within a Service may be

Responsibility

Criteria

Delegation

assigned to various specific related groups according to the degree of development of the existing Service organization. The actual preparation may be carried out by the chief of the Service or by the assistant chief. Parts of the Service plan may be prepared by the chiefs of the sections of the Service. Again, lower levels of the Service may actually prepare plans. When the State Civil Defense Service itself has not been manned with such officers at the State or other levels, preparation of plans may be at least initiated by the governmental or private group assigned to act as the Service or by a specialized civil defense committee set up in the functional field of the Service.

Much of the activity of the State Civil Defense Agency is related to assisting Agencies within the State at lower levels and assisting the Services at State to local levels in their preparation of plans.

This task differs from the first planning task in the assignment of basic responsibility but is similar to it in its continuing criticality, which decreases only during emergency operations.

For each Service the task of assisting and advising related groups in their preparation of plans may consist of assisting lower levels of the Service in their planning. This assistance may be provided by way of the political jurisdictions of the State within which these lower levels are organized. Assistance may be provided to the sections of the Service in their planning for separate aspects of the Service's assigned functions.

An important aspect of this task from the point of view of the Service is the provision by the Service of technical advice and assistance to government, military, and private groups whose normal activities are related to the Service's function but who are not primarily related to the Service by being assigned to perform as the Service or to support the performance of the

Over-all  
assistance

Specific  
assistance

cc  
A  
ppr  
l p a

Service's mission. For example, the State Civil Defense Institutions and Installations Service may be assigned with the task of encouraging critical private groups within the State, such as industries, utilities, and banks, to prepare plans for their own survival during an emergency and for repairing and restoring their facilities and services.

Since the plans of the various organizational elements related to civil defense within the State are prepared by those organizational elements themselves, the State Civil Defense Agency must treat the coordination of all civil defense plans within the State with Federal plans as a separate task.

The criticality of this task varies with the extent to which the State Civil Defense Agency does or can become involved with these groups in their planning. For example, the criticality of coordinating the plans of county and local Civil Defense Agencies with the State level plan is high, since the relationships among these groups is close. Criticality for this form of the coordination and planning task is high in the preparatory time phase. The State Civil Defense Agency may take a more passive role with respect to co-ordinating the civil defense aspects of the plans of military groups within the State. This does not reflect a lack of importance but instead reflects the relatively inactive part the Agency plays with respect to military planning. At the Federal level, this task is considered to be of high criticality, as is evidenced by the executive decision to place the Office of Civil Defense within the Department of the Army.

Over-all  
coordinati

Coordinati  
different  
groups

The specialized planning task of coordinating related plans becomes important to each Service, since it is often the Service rather than the Agency that maintains close contact with related groups. Each Service should be aware of all related groups within the State whose activities interact with those of the Service or who are concerned in any way with Service activities. For example, the State Welfare Service should coordinate its plans with the plans of any group within the State which is concerned with public health and related services. Much of this coordination of planning may be carried out by the Service and a specialized State civil defense committee related to the Service, since this committee may be deliberately organized to include representatives of related groups.

Certain Services will need to coordinate their planning with certain other Services. Because of the similar importance of their information activities to the making of decisions by the Agency, close coordination in procedures should be established among the Services assigned to the biological and chemical, intelligence, and radiological functional areas. When coordination among sets of Services in planning and in

Specific  
coordination

Coordination  
between  
specific  
services

operations, per se, is a major activity, it may be assigned to a specialized coordination officer in the State Civil Defense Agency.

Of course, each Service, because of its technical competency may perform a major part of the coordination of its plans with the over-all civil defense plans of the Federal, State, county, and local levels.

The basic criterion in coordinating plans is the development of a statewide and nationwide capability for insuring the maximum use by civil defense of all available resources. In addition, it is the stated policy of civil defense at all levels to obtain this capability by basing the civil defense organization and its plans and operations to the fullest possible extent upon existing governmental organizations, using to the maximum extent their existing organization, management, procedures, and resources. As an example of the importance of this criterion, a basic reason for including the Office of Defense in the Department of the Army was to make available to civil defense activities the appropriate organization and resources already developed for military defense.

Coordination  
between  
levels

Criteria

3B  
Reviewing  
and  
accepting  
plans

The final aspect of planning is the task of reviewing and accepting as final for the State all civil defense plans within the State. Responsibility for this task is shared by the Governor and the State Civil Defense Agency or its Director. In States where a State Civil Defense Council has been established, this group may also share in this task. Stating this task as a separate task is usually based on the wording of the State civil defense law.

Over-all  
responsibility

The State law may, also state that the plan goes into effect with this official acceptance, that is, with the affixing of the signatures of the Governor, the Director, and, in some cases of the Chairman of the Council. Such official timing of the plan's being effected is an essential part of the plan itself, since the plan is in the form of directives authorizing action to be taken in stated time phases by named elements of the civil defense organization and of related groups.

Statement  
of time  
when plan  
becomes  
effective

Having been established, the plan is printed or published and distributed to the persons and groups affected by the plan. This task need not be elaborated upon.

Publishing  
the plan

3B  
Reviewing  
and  
accepting  
plans

The task of reviewing and accepting plans within each Service is, of course, executive but not official for the State. The plan for each Service is accepted within the Service and is then submitted to the State Civil Defense Agency, usually in the form of an annex to the State civil defense plan. As such, its approval is complete when the entire plan is officially approved. Also, publication and distribution of the Service's plan is usually part of the same activity for the entire State plan. Each Service may, also, perform a related task of promoting the plan, that is, insuring that all related groups within the State are informed of the contents of the Service plan.

In earlier remarks, review and revision of plans was treated as an essential part of preparing plans. The sub-task of review and revision forms in itself, however, a large part of the Service's activities and responsibilities, because of its technical competency in its assigned functional areas. Each Service may be explicitly required to review its plans, not only periodically, but at stated time phases, for example, at the beginning of the critical tension time phase, at the beginning

Specific  
responsibility

Timing  
criterion for  
review and  
revision

of the initial recovery time phase, or during each time phase particularly as to the parts of the plan that pertain to the next time phase.

The primary criterion in this review of plans is that each Service's planned activities are those activities which are necessary, essential, or vital to preserve and protect the life of the public and to lead to the earliest possible orderly restoration of essential community functions. To accomplish this, it is important that the Service's plans be broad or comprehensive so as to cover all of its assigned specific responsibilities throughout the State for each time phase. A Service, such as the State Civil Defense Welfare Service, may require frequent review of its plans to assure that its many different assigned responsibilities are properly covered. It is perhaps easy to overlook in this review the type of Service responsibilities that are to be carried out in other than the emergency time phases, such as training by the Service of its own organization. Therefore, each review of plans should include, not only primary emergency responsibilities, but also secondary but essential non-emergency responsibilities.

Criterion  
of protection  
and recovery

A second criterion to be applied in this review of plans is that the plans be current, that is, appropriate to existing and changing situations. This criterion of the currency of plans extends, also, to reviewing plans to judge whether they are such as to make the Service ready for anticipated situations. Since the situation can change more rapidly and unexpectedly in the emergency time phases--immediately before, during and after the attack and shelter time phase--review of plans is especially important at these times. Since judgments of anticipated situations are made most validly over short periods of time, it is important to review plans for the next time phase's operations during each time phase. Of course, plans must be flexible since all situations cannot be validly anticipated. Reduced warning times and larger weapons increase the need for meeting existing situations of the actual attack and fallout conditions rather than blindly following pre-attack judgments.

Whenever a review of plans results in revision of plans, the task of publishing revised plans takes on marked importance. All groups concerned should be quickly informed of any revision

Criterion  
of  
currency

Prompt  
publication  
of revisions

in plans by official means.

The specific form in which plans are presented has not been considered in the comments above. The form of the plans will vary considerably for different plan annexes, for the over-all plan, and for plans at different levels. The planning materials may consist of statements of situations and policies. Plans may include directions of operations planned for each time phase and assigned to stated positions within the organization. Where appropriate, operations should be stated as standard operating procedures. Specific standards and guides may be stated. Detailed maps and lists will supplement most plans. Regardless of form, the complete and current set of planning materials must be published so as to be conveniently and readily available to all persons concerned.

Form of plans

Tests

Civil defense tests are conducted chiefly to evaluate the feasibility of the State's civil defense plans. Of course, they may, also, as exercises, serve an important training function, as will be discussed further in the lesson on training.

Tests  
versus  
exercises

The basic responsibility for planning, conducting, and evaluating civil defense tests rests with the State Civil Defense Agency. The Agency should act as a central core of all civil defense testing within the State to avoid duplication of effort and to insure that the results of all tests are fully exploited. The State level of the civil defense organization should maintain this central role in testing so that Federal guidance on testing methods and on areas that require testing can be efficiently used throughout the State. Further, when the State Civil Defense Agency acts as a link in nationwide testing, as such, it can insure that a nationwide test does not stop short at the State level but instead involves all levels down to the local level.

Over-all  
responsibility

In civil defense tests involving only one or a few of the functional areas of civil defense, only the closely related State Civil Defense Services may be involved. In such cases,

Specific  
responsibility

the Service may be chiefly responsible for planning, conducting, and evaluating the particular test. However, all phases of the testing should be coordinated by the Service with the State Civil Defense Agency. By such coordination, the Service can assure that the testing is consistent with standard operating procedures and with special directives from the State and higher levels. Also, this coordination serves to further a primary aim of testing, that is, to insure close cooperation or coordination within each Service and between Services at all levels within the State.

When testing involves only a few of the functional areas of civil defense but is carried out by the Agency--as may be the case, for example, in routine testing of warning systems--the related State Civil Defense Service is responsible for advising the Agency on the form of testing.

Specific advice on tests

A Service may recommend that the Agency conduct tests in the specialized areas assigned to the Service when the research conducted by the Service has pointed out possible inadequacies in State plans. Such inadequacies may become apparent as the result of changing situations within the State or changing specialized needs and resources.

Specific recommendations to conduct tests

Each Service will often be called upon to assist the Agency or other Services in general or specialized tests conducted by the Agency or those Services in negotiating with groups related to the Service for their cooperation during tests. For example, the State Civil Defense Information Service may be responsible for securing the cooperation of all public information media within the State during any tests. Or, the women's activities officer may be responsible for providing advice and assistance on those aspects of civil defense tests that involve women.

All civil defense tests, whether general or specialized and whether the responsibility of the State Civil Defense Agency or one of the State Civil Defense Services, should be organized around certain characteristics.

One of the more important characteristics of a test has been suggested in the remarks, above, that is the extent to which the test is to involve the entire civil defense organization. In this determination, the dimensions to consider are the levels of the organization to include and the functional areas of the organization to include. For example, in terms of various levels, a Federally initiated test may deliberately

Specific assistance in tests

Over-all test characteristics

Extent to which all elements are involved

be planned to stop short at the State level or may be planned to include all levels of civil defense. Whether or not volunteers, auxiliaries, and the public are to be included is an important aspect of the test. Final "check-outs" of shelter facilities must involve the public to assess the usefulness of shelters in given population distribution situations, for example. Also, some tests may be confined to the State or may, on the other hand, involve other States, as would be required in tests of the feasibility of interstate mutual aid plans. Again, certain tests of the suitability of specific operational methods to the needs of the State may be made in one or several local jurisdictions within the State, where the localities involved are selected to represent extremes of or typical characteristics of the needs of the State.

Another of the more important characteristics of a test      Timing  
of the feasibility of plans for emergency operations is, of course, the timing of the test. Tests should be scheduled both periodically and aperiodically. When the civil defense organization of the State is called upon or is authorized to act in natural disasters, the occurrence of a natural disaster creates an unscheduled aperiodic test of the State civil defense plan.

If participation in natural disaster operations is treated as a test, the participation will not only relieve suffering and save lives, but will also strengthen the civil defense organization in its capacity to perform in a wartime emergency.

A closely related test characteristic is whether the test will be announced or unannounced. Whether tests are or are not announced, they may differ according to the time phase of operations indicated in the first messages that initiate the test. For example, all personnel within the civil defense organization of the State should, at all times, be prepared for a practice alert and should be prepared to respond appropriately to any kind of alert, whether stand-by, full mobilization or full post-attack operations. Since the full State civil defense plan should cover civil defense operations in all time phases from preparatory through final recovery, tests should represent all of these time phases. Earlier tests may emphasize emergency time phases, such as critical tension, attack and shelter, and initial recovery; but, ideally, tests for any time phase should be included. Some tests should include the facility of the civil defense organization in making appropriate transitions during opera-

ations when one time phase is succeeded by the next. For example, a test may be initiated with messages that indicate that the time phase is the initial recovery time phase; and, then, later messages in the same test may direct the participants to operate as if they were now in the reconstruction time phase.

An important test consideration is of the type of threat simulated in the test and the degree of completeness with which the threat and the surrounding situation are simulated. All participants should be fully informed on these aspects of the test; stated alternatively, to make the test useful, all participants should be acting in the same environment. There should be no missing information of the type that would allow any group of participants to "plan the test as they go along," since if this occurs the results are difficult or impossible to evaluate. Also, missing information or poorly planned simulated information that leads to acting in a situation that could not occur, that is, that leads to invalid simulation, is at least a waste of effort or is of negative value since it may teach actions that are incorrect.

A test characteristic that must be considered is that of the difficulty of the test. The problems posed by the test to the participants may be simplified in early stages of test-

Type of threat

Complexity

ing and may be made progressively difficult with successive tests. When a complex set of problems is presented to a relatively unskilled or uncoordinated civil defense organization, the test may "break down," that is, the test may be terminated by unrealistic failures of certain persons or groups rather than by realistic failures such as could occur during the emergency simulated or by the scheduled termination of the test. With such a break down, the test results are of limited usefulness and may serve only to discourage the persons or groups involved from participating in later tests.

Perhaps the most important characteristic of a civil defense test is that it be planned and conducted so that it will make available information on the feasibility of the State civil defense plan. Many tests are planned and conducted enthusiastically but their results are never revealed or, if obtained, are never presented to the persons who need the results for their own planning.

All data taken during the test must be preplanned. When the test is unannounced, this requirement may necessitate setting up an "inner circle" of judges, who will be prewarned so that they can prepare themselves to take

Availability  
of results

Preplanned  
data taking  
procedures

data in the planned form and who, therefore, must not participate in the test. Since the hoped for result of the testing is to find the planned operations feasible and even admirably feasible, it is especially important to preplan methods for taking data on positive performance as well as on deficiencies that may occur, although without undue emphasis. The ideal of objectivity is often difficult to achieve during realistic simulations and in tests involving acquaintances. This ideal, however, should be borne in mind in selecting data taking techniques and observers.

To insure that data, when collected, will be analyzed and reported appropriately, these responsibilities may be assigned to given persons before the test or may be routinely an assignment of persons in stated positions for all tests.

Preplanned data analysis and report procedures

### Emergency Instructions

Despite the existence of civil defense plans prepared on the basis of sound research and tested for their feasibility, it will be necessary in an emergency to supplement the direction provided by these plans with emergency instructions in the form of specific rules, regulations, orders, and priorities. This section discusses the related tasks of issuing these instructions, legalizing them, and enforcing them.

Need for  
emergency  
instructions

The Governor, in both normal and emergency government situations, is, of course, the primary source of emergency instructions. For the purposes of governing civil defense operations in an emergency, instructions are issued in his behalf by the State Civil Defense Council, where state law so provides, and by the State to local level Civil Defense Agencies and Services within the areas of their responsibility.

Responsibility

The task of issuing emergency rules, regulations, and orders implies separate steps. First, it is necessary to formulate such instructions, either as new instructions or as amendments to existing instructions, and to adopt the instructions officially for the issuing group. The instructions must be formulated within the limits set by State law and with

Formulating  
instructions

due consideration of the State civil defense plan and other existing instructions. Also, of course, the instructions must be checked as to the extent to which they will promote the emergency civil defense effort. To meet these criteria, the task of authenticating instructions may be assigned to a separate officer within the State Civil Defense Agency, for example, to the plans and operations officer. This same officer, because of his familiarity with the basis of the instructions, may, also assist other groups in interpreting the instructions. Some instructions may be originally Federal instructions which are re-issued by the State and lower levels who, in such cases, act as a link in a communications chain. It is, therefore, the responsibility of these levels to make sure that the re-issued instructions conform with the original Federal regulations. For example, the State Civil Defense Transportation Service will base some of its instructions concerning marine transportation entirely upon Coast Guard regulations; the Service must assure that such instructions are in full compliance with the relevant Coast Guard regulations.

After emergency rules, regulations, and orders are formulated, authenticated, and adopted by the issuing group,

Promulgating  
instructions

the second step in issuing instructions is to promulgate the instructions to the groups and persons concerned. Emergency rules, regulations, and orders adopted by the Governor may be promulgated as appropriate throughout the State. Those issued by the State Civil Defense Council and the State to local level Civil Defense Agencies and Services may be promulgated throughout the area of their responsibility, as defined in the State law and in State plans. The authority involved in any emergency instruction should be clearly stated as part of the instruction. All groups concerned should be aware of the meaning for them of the phrase: "when so directed by the proper authority." Since such instructions are general and governing during the emergency, the question of emergency authority is of considerable importance.

The task of issuing instructions, also, implies the task of rescinding instructions. Since the rules, regulations, and orders in question are described as "emergency" instructions, they must carry or be followed-up by explicit information as to when they cease to be in effect. When possible, the text of an emergency instruction should state when it is to become effective and the time at which it is to be automatically

Rescinding  
instructions

rescinded. When this is not possible, the rescinding of the instruction should always be an explicitly required task.

For some purposes, enforcement of instructions must be treated as a separate step in issuing instructions. Statement of enforcement procedures are an essential part of every instruction. They may accompany the instruction or they may be a follow up of the instruction.

For certain types of instruction, a different sort of activity is required. When the instruction involves priorities, a separate task of establishing such priorities is involved. The State to local Civil Defense Services and Agencies must establish such priorities for the internal operation of their respective organizations and for external operations in the functional areas with which they are assigned. For example, the Agencies establish relative support and protective operations priorities for all Services. Within the support field of transportation, the Agencies may give highest priority to transportation for controlled movement operations. Within the field of communications and public information, the Agency will assign stated priorities for transmission of various messages to the public by the communications centers within the State to

Statement  
of enforce-  
ment  
criteria

Priorities as  
a special type  
of instruction

local level emergency operating centers.

As far as is possible, priorities will be assigned according to pre-established standard operating procedures.

Criteria  
for  
priorities

To some extent, it will be necessary to assign priorities according to existing requirements determined by requests from the field and existing conditions determined by damage assessment and other status and capability field reports.

Some priorities will originate at the Federal level. In such cases, the civil defense organization within the State may be responsible for disseminating and controlling these priorities. For example, if transportation facilities within the State are placed under Federal control, the State Civil Defense Transportation Service may be required to disseminate and control the use of transportation during an actual emergency.

The content of emergency rules, regulations, orders, and priorities has to do with the resources for which the issuing group is responsible. For example, the State Civil Defense Communications Service will need to establish priorities for the use of its communications facilities, especially when widespread and serious disruption of service

Content of  
instructions

and destruction of facilities places too heavy a load upon these facilities. It may follow pre-established standard operating procedures in giving highest priority to messages from the State Civil Defense Warning Service, the Intelligence Service, and the Information Service, for example. Other priorities may have to do with the deployment of resources, a type of priority that is important to the State Civil Defense Fire Service, for example. Other priorities may have to do with protecting, conserving, and regulating the release of resources, as would be an important type of priority for any of the Services assigned with a supply function, such as the State Civil Defense Fuel Service. Certain Services may issue priorities or regulations in specialized form, such as the road movement approvals issued by the State Civil Defense Police Service through its traffic control stations. Other services may issue instructions in the form of information which acts as a regulation, as is the case with the information issued by the State Civil Defense Radiological Service on the nature and extent of operations that may be conducted by any group in stated areas considering the current and expected contamination levels and considering the radiological security measures that can be taken.

**3D**  
**Procedures**  
**for issuing**  
**instructions**

A final and necessary step is implied in issuing instructions, that is, that all issuing groups must file each such rule, regulation, or order adopted with the appropriate department of the State Government, according to requirements set up in State statutes.

**Filing of  
instructions**

3D  
Legal basis  
for  
instructions

Emergency instructions must be legal. Again, in this process, the Governor plays a critical role. He is authorized to invoke extraordinary legal powers in an emergency. Such powers are specified in State law, for example, to include, emergency acquisition of property, permitting civil defense operations across State lines.

This emergency power of the Governor continues until control by the Legislative Branch of the State Government is possible. It is, of course, for this reason that the Legislative Branch is required to convene as soon after the declaration of an emergency as is possible. Its emergency legislative actions consist of defining as legal the acts of the emergency government. This definition is usually as an appropriate amendment to State law.

As suggested in the previous section on issuing instructions, the Department of State at the State level receives, reviews, and approves as appropriate all emergency rules, regulations, and orders adopted by the Governor, the State Civil Defense Council, the State Civil Defense Agency, and the State Civil Defense Services. The Department of State, also, receives and files every amend-

Responsibility  
of the  
Governor

Legislative  
action

Central  
review  
and  
approval

ment to State law adopted by the Legislative Branch of the State Government.

The enforcement of adopted and legalized instructions may require special tasks that cannot be included in the instructions themselves.

The basis for enforcement is established within the State civil defense law as a definition of the degree of penalty for violation of an emergency civil defense rule, regulation, or order. Such violation may be defined as a misdemeanor and the law may be defined as binding not only on government employees but also on civil defense volunteers and the general public.

Other than routine enforcement may require legal action taken chiefly in the post-attack time phases. Such action may involve prosecution of civil and criminal matters relating to enforcing civil defense rules, regulations, and orders, with the prosecution being carried out by the State Civil Defense Legal Service acting for the State Civil Defense Agency. Of course, in such cases, the State is the prosecuting party.

Routine enforcement of an emergency instruction will

Instruct  
versus  
enforce

Legal  
definitio

Legal  
action

Routine  
enforce

often be carried out by the governmental group most closely related to the State Civil Defense Service which issued the instruction, since this governmental group can act under its existing normal legal powers without special emergency authorization. For example, instructions issued by the State Civil Defense Fiscal Service to regulate private banking activities for civil defense purposes may be enforced, when necessary, by the Department of Banking of the State Government's Executive Branch. In such cases, the relationship of the civil defense group in issuing instructions and the governmental group in enforcing instructions may be a procedure pre-established in the State civil defense plan.

3E  
Deployment  
of resources  
for operations

### Emergency Operations

Before an emergency, each State Civil Defense Service prepares and publishes standard operating procedures for moving its resources among target, non-target, assembly, and damaged areas, with the aim of increasing the Service's capability for operating anywhere within the State during an emergency. Such procedures must be kept current. The resources in question include, not only equipment and supplies, but also personnel, such as the staff of the Service and any auxiliaries assigned to the Service. Further, the resources include any resources available to the Service from related groups. For example, the State Civil Defense Medical Service will provide procedures for moving ambulances, controlled by public and private hospitals throughout the State, to damaged areas as needed.

Movements of resources involve separate tasks. First, movements may be undertaken to insure the availability of resources. Second, movements made by each Service must be coordinated with other civil defense movements. Third, each Service will move its resources in the process of performing its emergency operations and in providing mutual aid to other Services.

Procedures  
for movements  
of resources

Kinds of  
movements  
of resources

As the situation requires, beginning with the critical tension time phase, each Service may stockpile resources in non-target areas. Or, as possible, each Service may evacuate or disperse at least the most accessible of its resources from target to non-target areas. To carry out these movements and to provide means for receiving the resources so moved, it is necessary to have complete standard operating procedures prepared prior to a state of extreme emergency. Such procedures will, also, cover the reassignment of such resources as they are received. Reassignment depending on the time phase and the current conditions, will be to pre-designated assembly areas or to damaged areas. Reassignment procedures will be important for any resources which are no longer needed in the immediate operations to which they were initially assigned, as may be the case when personnel request reassignment after their primary operations are completed.

In all of these preventive and preparatory movements, emphasis would, of course, be placed on critical or essential resources, on available and accessible resources, and upon moving the maximum amounts of resources. To carry out

Movements  
to insure  
resources  
availability

Criteria  
and  
conditions

3E  
Deployment  
of resources  
for operations

these movements of resources, it may be necessary to provide enroute communications, housing, security, and special information such as that concerning priorities and destinations.

All movements of resources, whether preparatory or operational, must be coordinated with other civil defense movements. For example, preparatory resources movements must be conducted so as not to impede remedial movements of the public. Each Service must coordinate its movements with those of all other Services and of related groups, such as the military. Policies and practices for coordinating movement are included in the State civil defense plan. Actual coordination of movements will be conducted by way of the State Civil Defense Agency and its Director and, where appropriate, by way of the regional office of the Office of Civil Defense.

The State plan and these agencies will state who of the various interested groups has the primary responsibility for coordinating their own movements with those of the other groups. Such statements are important in coordinating civil defense and military movements. Also, the plan and these agencies can provide the necessary support for coordinating movements, such as designating pick-up and delivery points,

Coordinating  
resources  
movements

Responsibility  
and  
support  
for  
coordinating  
resources  
movements

arranging for loading and unloading assistance, arranging for police escort, supplying emergency highway routing information, and providing vehicles.

It can be expected that preparing for and carrying out civil defense operations will involve large scale movements throughout the State. Special measures to coordinate movements will be required to prevent as far as is possible and practical interference among movements and, therefore, to increase the possibilities of carrying out field operations that are efficient and that are in accordance with priorities dictated by operational conditions, radioactive fallout, and damage assessments.

Operational movements are also carried out to put into practice pre-established mutual aid agreements or as the result of emergency requests for aid. Mutual aid agreements will be discussed in a later lesson. Acting upon emergency assistance requests implies that the Service have available standard operating procedures for receiving and evaluating such requests and a means of making such assistance available through emergency instructions. Following such instructions will involve dispatching or deploying personnel, equip-

Criteria

Movements  
to provide  
mutual aid

ment, and supplies according to the coordination of such operational movements, as mentioned, above, and according to current location reports and local civil defense plans.

In civil defense emergency operations, resources are made available by all Services so as to make possible operations that will promote public safety, health, and welfare.

In this sense, the various State Civil Defense Services can be subdivided into protective and supporting Services, where the protective Services are those who contact the public for this purpose. The functions of the so-called supporting Services will be discussed in later lessons. In the remainder of this lesson, the functions of the protective operational Services are reviewed briefly.

The protective Services can be further classified by type of protection: public safety, public health, and public welfare. Within each of these, certain civil defense functional areas can be included. The protective service area of public safety can be considered to include three functional areas--police, fire and rescue. The area of public health includes health, medical and mortuary. The area of public welfare includes registration, welfare, and religious affairs.

Movements  
to carry out  
protective  
operations

Types of  
protective  
operations

Most civil defense organizations title their different State Civil Defense Services according to such functional areas. However, in performing the tasks appropriate to one functional area, other Services may assist the primary Service, thus forming with the primary Service a task force in the performance of that specific task.

Task forces

For example, the single task of controlling traffic is considered, below, as within the police functional area. This point of view does not necessarily imply that the task is performed by the State Civil Defense Police Service. On the contrary, in most States, the task is performed by a task force which includes the Police, Transportation, and possibly the Warden Services. In this task force, each of these Services performs a different aspect of the task: the Police Service emphasizing enforcement aspects, the Transportation Service emphasizing highway aspects, and perhaps the Warden Service emphasizing aspects of the task involving direct contact with the public.

Of course, for this task force approach to a single task to be efficient, there must be adequate coordination between the different members of the task force. To assure such coordi-

nation, the State Civil defense plan must describe the responsibilities of the different members of the task force. Especially, the State plans should make clear which member of the task force has primary responsibility. The statement made, below, as to primary responsibility in a task force are suggestive only. Individual States will assign such primary responsibility for performing a task according to the actual conditions within their own States.

3E  
Public safety operations:  
police

The basic police function which is given top priority is, also, the basic criterion of all police tasks--to protect and save the lives of the public.

Criterion and basic task

The second police task--investigating crime--may include operating a crime laboratory as an installation of the State Civil Defense Police Service.

Investigating crime

The third police task involves safeguarding and reporting all lost and found property.

Safeguarding and reporting lost and found property  
Controlling traffic

Fourth, one of the more important police functions is traffic control. In traffic control, the State Civil Defense Police Service forms the keystone of a task force including, among others, the State Civil Defense Transportation Service. The task of traffic control is so complex that, in some States, it is assigned to a separate State Civil Defense Traffic Service. Controlling traffic includes facilitating the flow of traffic, diverting traffic, preventing entry to certain areas, and officially passing traffic to certain areas. To accomplish this, a system of obtaining and reporting traffic flow information is required. All of these functions are performed chiefly by the traffic control stations, usually operating as installations of the State Civil Defense Police Service.

3E  
Public safety operations:  
police

Facilitating the flow of traffic may involve specific convoy procedures. It may be necessary to arrange for traffic assembly points to form convoys. The State Civil Defense Police Service may be called upon to protect the convoys of other groups.

Traffic check points and related identification procedures and road movement approval procedures will be required to divert, prevent entry, or pass through traffic, as appropriate. All but essential traffic will be diverted from target or damaged areas. Wide variations in circumstances will make applying rigid rules difficult or inappropriate. The State plan may provide for a single card or pass guaranteeing automatic passage through police lines or civil defense personnel, and preferably, also for government, military, and private personnel. Alternately, specific identification procedures may be set up in the State civil defense plan, which procedures may, for example, name certain agencies--such as the FBI, CIA, AEC, State Police, and the State Civil Defense Agency--whose personnel may enter such areas upon presenting their own official identification. Press cards may be honored, if so stated in the State plan,

Facilitating the flow of traffic

Diverting, preventing entry, and passing traffic

under certain relatively nonhazardous conditions in which the presence of the press will not interfere with operations. The State plan will usually state that properly marked emergency vehicles, such as fire trucks and ambulances, can pass police lines without being stopped if they are on emergency missions.

Traffic information procedures will begin with pre-warning estimates of highway capacities and traffic requirements for emergencies. Actual emergency traffic information collection and reporting procedures will be carried out so as to provide adequate information to all interested State Civil Defense Services, civil defense coordinators below the State level, and related groups.

The fifth special police task is, also, complex. Under generally chaotic conditions, especially when large concentrations of people can be anticipated or are occurring, the normal police task of maintaining law and order can be quickly complicated by the related tasks of controlling or alleviating public confusion, panic or hysteria and of controlling rioting and looting. The task of maintaining law and order is further complicated in an emergency by the addition to the usual governmental laws of special civil defense emergency instructions

Traffic information

Maintaining law and order

which must be enforced. These complications imply that the State Civil Defense Police Service and other Services which cooperate with the Police Service in this task, such as the State Civil Defense Warden Service, must be especially prepared in panic control and related procedures and must be kept informed of all emergency instructions.

Sixth, the State Civil Defense Police Service, with the assistance of the State Civil Defense Warden Service, is responsible for the specific task of controlling sabotage and other subversive activities. The Police Service must act in full liaison with the FBI and according to its instructions. The basic aspect of sabotage control, from the point of view of the State Civil Defense Police Service is to report all such incidents to the FBI. Reports would be made on both possible and actually attempted sabotage including any matters involving fissionable materials or clandestine weapons or devices.

The seventh specific police public safety task also involves a close relationship between the State Civil Defense Police Service and another group--the military. In its responsibilities with respect to explosive ordnance, the State

Controlli  
sabotage

Isolating  
and  
evacuat  
explosiv  
ordnanc

Civil Defense Police Service maintains close liaison with and is instructed by the military. It reconnoiters and evaluates each incident involving explosive ordnance and promptly reports such incidents to the nearest Army Ordnance Control Center. The Service will be responsible for evacuating the area near active unexploded ordnance and it may be responsible for the disposal of such ordnance.

The eighth task is performed in close liaison with the military. In this task, the State Civil Defense Police Service locates and takes custody of downed or captured hostile aircraft, crews, and persons. It reports such incidents to the local Civil Defense Director and to the nearest military Commander. Of course, such aircraft and persons are turned over to the military.

Controlling  
downed  
aircraft

The primary criterion in fire control activities is to protect and to minimize damage to public life and property in fire situations. Pre-arranged plans are necessary in fire fighting but fire fighting activities must be guided by the existing conditions since fires due to sabotage or to the detonation of nuclear weapons can occur anywhere. The techniques used include both rural and structural fire fighting involving, respectively, mainly vegetation or buildings.

Criteria

The State Civil Defense Fire Service conducts its fire fighting activities of fire containment, suppression, or extinguishing through the local political jurisdictions of the State with the cooperation of the State Civil Defense Warden Service. This cooperation involves especially fire prevention activities. As requested, it is assisted by the State Civil Defense Engineering Service in such engineering activities as constructing firebreaks, providing temporary water supplies, and providing heavy equipment and demolition experts.

Controlling fires

The work of the State Civil Defense Rescue Service in minimizing casualties and deaths is carried out as a team effort with the cooperation of the State Civil Defense Engineering Service and the State Civil Defense Police Service.

The Warden Service is prepared to perform light rescue operations. The Engineering Service, upon request from the Rescue Service, may provide assistance, especially in heavy rescue activities, by providing heavy equipment, demolition experts, and the like.

In the initial recovery time phase, blast and thermal effects can be expected to result in partially or wholly collapsed buildings, structures, and vehicles, requiring special rescue techniques and equipment. Rescue operations carried out in local jurisdictions must consider, for example, the local radiological situation, requiring close coordination with the State Civil Defense Radiological Service. Rescue operations may often be conducted in burning structures or in the path of anticipated fires, requiring cooperation with the State Civil Defense Fire Service. Although the primary aim of the rescue operations is to rescue the public including casualties and the dead, secondary rescue activities may be required. For example, it may be necessary

Conducting  
rescue  
operations

Conditions  
and  
criteria

3E  
Public safety  
operation:  
rescue

to preserve the food supply by rescuing animals, thus,  
necessitating coordination with the State Civil Defense Food  
Service. It may also be necessary to coordinate with other  
Services in accomplishing similar rescue tasks directly  
related to the restoration of essential community functions  
as early as possible. For example, the rescue of critical  
records may be requested by the State Civil Defense  
Continuity of Government Service.

Emergency health operations are similar to normal public health operations, including activities in contamination control, public health care, and communicable disease control.

The emergency situation is quite complex, since after an attack the radiological, biological, and chemical hazards are added to problems resulting from the unusual displacement and concentration of persons in locations with inadequate health safeguards. The extreme situations to be expected will require more fully total public health control of contamination and communicable disease than is required in normal conditions.

Criteria

Public health care, such as maternal and infant care, must be provided to persons displaced from their usual means of care. This care will be carried out in large part through the cooperation of the State Civil Defense Welfare Service.

Providing  
public health  
care

In controlling contamination, it will be necessary to carry out inspection, prevention and regulatory measures, such as extensive emergency sanitation control measures to decrease the likelihood of contamination due to rodents and insects. Special problems will arise in disposing of industrial and radioactive waste, requiring sanitation engineering operations to improve disposal systems. Special sanitation engi-

Controlling  
contamination

engineering procedures must be provided in mass housing such as in shelters and in such related specialized areas as air and surface contamination of kitchens and canteens with their milk, food and water supplies. Industrial health problems will be increased for the work force. It may be necessary in maintaining and restoring community facilities to protect, operate, or install water supply facilities or pasteurization plants or the like.

The control of communicable disease may be complicated by deliberate biological warfare or sabotage. It will be necessary to maintain surveillance of the incidence of communicable diseases, not only within the State, but also in neighboring States. Such information must be constantly evaluated and reported. Where appropriate, total emergency immunization programs may be required.

Controlling  
communicable  
diseases

3E  
Public health  
operations:  
medical

Activities in the medical area are among the most critical in civil defense. These activities are such that immediate, widespread, and competent response to attack is necessary. In meeting the emergency situation posed by radioactive exposure, there does not at the present appear to be either a first-aid type of treatment or a more long-term type of treatment based on medical care. The current answer to the problem of radioactive exposure appears to be the shelter.

Criteria

Any of the State Civil Defense Services who will contact the public during attack or immediately after attack is expected to perform a medical task to the extent of administering first aid to the public. As is usual, emergency first aid should be administered only if necessary and only as is sufficient to sustain life, and, where possible, in full coordination with medical specialists. The State Civil Defense Medical Service will, in most States, provide in the field first aid units as a primary source of such medical care. Therefore, it can be said that the medical civil defense program consists of a basic assumption that shelters will be available to prevent or diminish casualties due

Administering  
first aid

specifically to radiation and to provide immediate medical care and longer term medical facilities and care to casualties due to other causes. The immediate medical care is chiefly in the form of first aid.

Medical and hospital facilities will be in such short supply immediately after attack that maintaining such facilities will become a much more serious problem than the comparable normal task of hospital administration would suggest. For example, in many States, field hospital units may be maintained. Of course, existing public and private facilities will be maintained as is possible. In this, the State Civil Defense Engineering Service may be called upon for special assistance, such as temporary repair of hospitals or replacing essential hospitals. These facilities must be maintained, not only as structures, but also as facilities adequately equipped, supplied and manned. Preparation in this is especially important.

The task of actually providing care for casualties includes not only medical and surgical care, but also hospital and nursing care. This, too, appears to be a problem that is especially responsive to adequate planning.

Maintaining facilities

Providing care

**3E**  
**Public health**  
**operations:**  
**medical**

In all medical problems, a major situational factor to be considered in planning is the mass of persons that must be treated in an emergency.

3E  
Public health  
operations:  
mortuary

Civil defense mortuary tasks, like medical tasks, follow closely the pattern of mortuary tasks required under normal conditions. However, as with medical tasks, emergency conditions will set up unusual situations, chiefly in the mass of cases to be considered. Further, the State Civil Defense Mortuary Service may have to provide more of its basic facilities than it must in normal conditions.

As an example of the latter criterion, the Mortuary Service may have to arrange for the mass production under emergency conditions of simple burial containers. Similarly, it may have to construct cemeteries or mass burial excavations, which may require the assistance of the State Civil Defense Engineering Service.

The basic emergency mortuary task is searching for and burying the dead. In either a natural disaster or a war-caused emergency, public health considerations require that this task be carried out as soon as possible and that it be carried out according to procedures coordinated with the State Civil Defense Health Service and the State Civil Defense Medical Service. This task implies associated tasks such as preparing the dead for burial and performing burial rites, by

Providing burial containers and cemeteries

Searching for and burying the dead

way of the State Civil Defense Religious Affairs Service. The search may include search for isolated, unmarked, unsuitable graves and inspection that all burial tasks are performed according to prescribed procedures.

It is necessary that graves be identified and that the locations of such marked graves and cemeteries be recorded in simple maps or sketches.

The State Civil Defense Mortuary Service will, also, be responsible, by necessity, for collecting, handling, and identifying the personal effects and property of the dead.

It must, further, register the dead. This activity implies identifying the dead, obtaining death certificates, preparing burial permits, and keeping records of these kinds of information, in such a manner that legal requirements are met.

Marking and mapping graves

Handling personal effects

Identifying the dead and related procedures

3E  
Public w/  
operation  
registrat

The basic registration task is operating central registries. These registries are usually arranged as a single statewide system including separate county level registries and one State level registry. Such registries may begin operations in the critical tension time phase.

Operating  
central  
registrie

Actual registration activity will assume its full criticality in the post-attack time phases and must be adjusted to the existing conditions. It can be assumed that widespread and extensive movements of the public or the need to take the nearest shelter when at work or school will result in separations of families and displacements of persons. These displacements can be corrected only through complete central registry activities. The central registry activities are, of course, based on receipt of completed individual registration forms and vital statistics summaries.

Criteria

Any State Civil Defense Service which contacts the public may operate registration teams who are prepared to take individual registrations on forms established by the State Civil Defense Registration Service and to transmit the completed forms to county central registries according to procedures established by the Registration Service. Services

Taking  
registra  
and  
transmit  
them to  
registrie

re  
is  
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3E  
Public welfare  
operations:  
registration

who may take registrations include the State Civil Defense Warden Service and the State Civil Defense Welfare Service.

Also, certain Services, such as the State Civil Defense Health, Medical or Mortuary Services will, as part of their duties compile, maintain, and update vital statistics. These records will be supplied to the Registration Service. The form in which the records are taken may be, for example, based on personal identification tags or cards issued to any member of the public contacted by these Services.

With the receipt of this type of information, the central registry system forms its registration data base by maintaining files of such information.

This data base of registration information is used to answer inquiries. An answer may be in response to a request received from any State Civil Defense Service. On the other hand, requests or inquiries may be produced automatically by correlating the registration information to locate missing data. The same correlation process is used to produce answers to inquiries. Where possible, inquiries are received and answered at the county level; when this is not possible, inquiries are referred to the State level.

Maintaining  
and supplying  
vital  
statistics

Filing  
registrations

Answering  
inquiries

3E  
Public welfare  
operations:  
registration

When inquiries cannot be answered within the central registries, assistance may be requested from the State Civil Defense Police Service which is responsible for providing facilities for locating missing persons and identifying persons in shock or amnesia or identifying the dead.

Performing  
identification  
or search for  
missing  
persons

3E  
Public welfare  
operations:  
welfare

Maintaining  
welfare  
centers

The provision of welfare services to the public is usually through welfare centers maintained by the State Civil Defense Welfare Service. Some welfare services may be provided by other Services at their installations when groups of civil defense workers or of the public are retained at such installations for a sufficient time to need such services. For example, the State Civil Defense Police Service may provide for feeding persons and for overnight billeting, at its traffic control centers, for persons being staged through those centers. Similar welfare services must be provided in shelters for any length of stay in shelter. Such services and those related to other public safety, health, and welfare activities will be discussed in connection with shelters in a later section. In terms of facilities for welfare services, the State Civil Defense Welfare Service may be assisted by the State Civil Defense Engineering Service in maintaining its welfare centers. It may be necessary to construct temporary centers or to repair and replace centers. It may be necessary to construct, repair, or replace only certain of the centers' facilities, such as housing or feeding facilities.

As with all services to the public in an emergency, welfare centers will be faced with serious crowding. To the fullest extent possible, the amount and time pattern and condition of the flow of evacuees must be anticipated. In all cases, short term care must be emphasized. Long term care must be avoided; or, if it is not possible to avoid it, long term care may be considered a post-attack problem requiring specialized recovery activities.

Criteria

The Welfare Service will be called upon to provide to the public, including evacuees and family groups, special services, such as counselling and case work. Such services should be held to the minimum consistent with the basic necessities for life.

Providing  
counselling  
and case  
work

An important welfare task is provision of housing, billeting and bedding to evacuees, at least at a minimum level. As post-attack conditions improve, progressively better lodgings will be possible. Early post-attack conditions may require full use of all remaining housing, including hotels, private homes, and the like.

Providing  
housing

Mass feeding will, also, be minimum in the mass care phase of early post-attack and can be expected to im-

Providing  
food

prove in quality in the extended care phase of later post-attack,  
or to be turned back into private hands at least where cooking  
facilities are privately available in later post-attack. Groups  
in transit may be fed at temporary feeding stations with food  
that is readily consumable in transit. Menus may be a  
matter of supply; but pre-emergency plans prepared in co-  
operation with the State Civil Defense Health Service may be  
provided to suggest combinations of food that are likely to be  
available, that will satisfy nutritional needs, and that are  
quickly and easily prepared. Distribution of water will be  
a serious feeding problem. Water for drinking will be given  
highest priority. Water for cooking will be a lower priority.  
And water for personal cleanliness, although important,  
must be of lower priority.

Distribution of clothing must be limited to basic ne-  
cessities for warmth and cover and, in later time phases,  
for a change of clothing

Providing  
clothing

The State Civil Defense Welfare Service may, also,  
in the recovery time phases, allocate financial assistance as  
funds or credit to the public, to assist them in their return to  
normal conditions.

Providing  
financial  
assistance

3E  
Public welfare operations:  
religious affairs

One of the special functions of the State Civil Defense Welfare Service is to provide personnel and facilities for the church, religious, and spiritual needs of evacuees at welfare centers. This function is carried out in coordination with the State Civil Defense Religious Affairs Service, which carries the basic responsibility for all religious affairs in connection with civil defense. The Religious Affairs Service may act with mobile support units, with the State Civil Defense Mortuary Service, or with any Service in which there is a need for spiritual guidance and for the performance of religious rites.

The right to administer religious aid is reserved to the existing churches and clergymen. They are required to perform their religious duties in such a manner as not to deny or disparage the rights and beliefs of any faith. The existing clergymen and churches in the State may take on functions of providing moral and emotional guidance to the bereaved or the emotionally disturbed. In this respect, in dealing with groups of the public, they may exercise a considerable influence in preventing panic by emphasizing to the

Providing religious services

Criteria

**3E**  
**Public welfare**  
**operations:**  
**religious**  
**affairs**

**public the more positive, orderly, and confident actions of  
cooperating with the civil defense organization and of accept-  
ing civil defense regulations as a means to further self pro-  
tection and community protection.**

Resources Management and  
Economic Controls

Within an individual State, the responsibility for approving requests from civil defense groups within the State for any resources to support their operations is held by the State Civil Defense Agency. The authority for this responsibility is usually defined in the State's civil defense law, as a responsibility delegated by the Governor to the Agency for civil defense purposes.

In terms of the relationships of the Agency to higher levels than the State level, the Agency exercises a dual function in carrying out resources or support operations initiated both by the Office of Civil Defense and the Office of Emergency Planning. In general, these two types of operation differ in time phase, with the office of Emergency Planning increasing its activities during the reconstruction and later time phases and with the Office of Civil Defense decreasing its activities correspondingly. However, in the preparatory time phase, both Federal groups will assist the Agency in resources planning and preparatory activities.

In terms of the relationships of the Agency to civil defense and related groups within the State, the Agency will act as a central source of approval of resources requests, that is, to coordinate better statewide civil defense operations.

Control of  
request  
procedures

The State Civil Defense Agency may organizationally delegate stated aspects of its control of resources requests to specialized State Civil Defense Services or, where a full organizational group is not required, to a specialized officer on the staff of the State Civil Defense Agency. As has been done throughout this course, for convenience of expression, this officer or Service will be referred to as a Service; in other words, the term "Service" should be read as "officer or Service, depending upon the needs of the individual State." In a full delegation, the Agency may set up a State Civil Defense Resources Management and Economic Controls Service to carry the central responsibility for controlling all resources available to the State for civil defense operations within the State. Further, to control the handling of all resources available for civil defense within the State, the Agency may set up a State Civil Defense Procurement Service and a State Civil Defense Fiscal Service. In addition, to assist the Agency in specialized aspects of its task of obtaining resources, the Agency may set up at least three Services: a State Civil Defense Federal Assistance Service, a State Civil Defense Mutual Aid Service, and a State Civil

4A  
Definition of support

Defense Military Affairs Service. Finally, the task of handling specific types of resources within the State may be delegated to Services named according to the specific type of resource for which they are responsible, forming, for example, State Civil Defense Manpower, Supply, Transportation, Engineering, Institutions and Installations, and Utilities Services. By this delegation, a group of Services or of officers may be set up who have in common that their mission is to provide support to all services, especially to the protective Services, as defined in the last lesson.

The problem of obtaining resources for projected emergency civil defense protection of the public has been, in the minds of some, a serious stumbling block in the possible usefulness of any civil defense effort.

Availability of emergency support

The best information available indicates a strong probability that there would be enough... items essential for survival to carry the population through to a point where recovery could gather momentum.<sup>1</sup>

Earlier estimates of damage appear to have been overstated. New data appear to provide a more realistic and hopeful picture.

All this should not be interpreted as minimizing the postattack problems that would face us...  
Surviving resources would provide a base for recovery. The rate of recovery is highly responsive to relatively inexpensive planning and preparation.<sup>2</sup>

The Office of Emergency Planning is conducting extensive studies in such planning within many departments or agencies of the Federal Government.

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1 "Closing Statement, The Honorable Steuart L. Pittman, Assistant Secretary of Defense (Civil Defense), before Subcommittee No. 3 of The House Armed Services Committee, House of Representatives, July 11, 1963," p. 9.

2 "Supplementary Statement on the Postattack Environment, The Honorable Steuart L. Pittman, Assistant Secretary of Defense (Civil Defense), before Subcommittee No. 3 of The House Armed Services Committee, House of Representatives, July 10, 1963," pp.6-7.

The specific resources management task of inventory- Responsibility  
ing resources is performed within each of the State Civil De-  
fense Services for its own resources and by the State Civil  
Defense Resources Management and Economic Control Serv-  
ice for all civil defense resources within the State.

Such inventories of resources form the realistic data Purpose  
base mentioned in the comments above, upon which effective  
recovery operations can be based.

The list of different resource items to support all Items  
elements of the civil defense organization within the State  
seems nearly endless. It is especially important in preparing such lists and associated inventories that the State Civil Defense Agency depend upon the over-all technical competence of the Resources Management and Economic Controls Service and the specialized technical competence of each of the Services.

For all resources inventories, formal inventories Timing  
should be prepared in the pre-emergency time phases and these inventories should be updated as required to be current for all time phases, considering resources on hand, resources distributed, and the designations to which they were distributed.

These data may be collected at the level where the collection process is most conveniently carried out but they should be available for all levels of each element of the civil defense organization.

Collection

Included should be all civil defense and non-civil defense resources owned by, controlled by, of interest to, or assigned to the particular element of the civil defense organization.

Current and anticipated resources may be included. Resources should be classified as to availability. If the resources are available only through related groups, such groups or owners should be noted as the means of availability. Especially essential or strategic resources should also be noted. For all resources, the following categories of information should be included: classification, type, description, or use; average, estimated, or exact quantity or amount; location or storage points mapped by county, locality, or operational area; dispatch provisions or normal distribution channels; and related equipment, supplies, or the like required, such as special fuels and the like. Certain types of resources, such as manpower, may be fully inventoried only by considering additional classifications; such points will be discussed as appropriate, below.

**4A**  
Inventory  
procedures

Each Service would be assisted in this inventory task by standard operating procedures provided by the Resources Management and Economic Controls Service.

Standard  
operating  
procedures

When each Service's resources inventory is prepared by the Service, it should be published. Especially, copies should be filed at Service headquarters and with the Resources Management and Economic Controls Service or the State Civil Defense Agency and emergency operating center.

Publication

The task of maintaining resources inventories for all civil defense resources within the State is a task of relatively high criticality, especially in the preparatory time phase and in the post-attack time phases. Closely related tasks involve estimating civil defense requirements and economic potentialities within the State. These data can be compared with resources inventories, damage assessments, and other status reports to provide the State Civil Defense Agency or emergency operating center with the basic data it needs to allocate resources according to a realistic and effective priority system.

In the critical tension time phase, the Resources Management and Economic Controls Service may be required by anticipated circumstances to perform a different type of task, that is, salvaging, rehabilitating, and re-assigning resources within the State. Depending on the function of the Office of Emergency Planning, this task may continue at least through the initial recovery time phase and possibly into the final recovery time phase. Rehabilitation of resources within the State may be conducted to meet the minimum essential emergency operating needs of all civil defense and government groups within the State. Re-

Basic data of inventories, requirements, and potentialities

Emergency resources control

assignment would follow priority systems of the State Civil Defense Agency. Salvage would be conducted according to potential value and use of the resources. Certain services would usually be emphasized, such as schools, hospitals, utilities and housing. In this task, the Resources Management and Economic Controls Service may be assisted by other Services as appropriate. For example, the State Civil Defense Transportation Service may act to salvage and inspect frustrated cargoes. The State Civil Defense Rescue Service may recover vital records or resources, such as food, medical supplies, and clothing, that are essential to rehabilitation activities. The State Civil Defense Food, Fuel, and Medical Services may act to resupply the industries that are related to them from other than normal resources; or they may take measures to develop and maintain production, by related industries, of the supplies they respectively require.

Procurement and Fiscal Controls

The functional area of procurement, with its major task of requisitioning supplies, equipment, and services, is considered independently, to emphasize that procurement must be carried out only by authorized persons and only according to the established purchasing procedures of the State.

In the normal preparedness time phase, one of the officers of the State Civil Defense Agency may act as the procurement officer, responsible for processing all official requisitions for the civil defense organization within the State. Under emergency conditions, however, many persons may be required to carry out this responsibility.

Therefore, a State Civil Defense Procurement Service may consist of an organization ready to act upon the declaration of an emergency by the Governor. This declaration, in accordance with the State civil defense plan, may automatically authorize its previously officially approved staff to use the official State procurement forms for civil defense purposes.

The State law, the State civil defense plan, and the declaration of an emergency by the Governor may specify the

Procurement function as independent

Responsibility

Authority

special conditions and limitations under which the State Civil Defense Procurement Service can act. For example, payment may be carried out by the State Civil Defense Agency or emergency operating center rather than by the Procurement Service.

Certain items, such as those required to rehabilitate the public, may be procured only by given State Civil Defense Services, in this example, by the State Civil Defense Welfare Service.

As is indicated by these illustrations of the conditions under which procurement is authorized, the State Civil Defense Procurement Service has a greater than usual requirement to be thoroughly versed in all laws, plans, and directives pertinent to its work.

The responsibility for all civil defense fiscal activities within the State is basically that of the State Civil Defense Agency. These activities are summarized in all time phases by maintaining accounts of all civil defense funds and property within each organizational element of civil defense and by periodically reviewing and projecting these accounts in a civil defense budget for each organizational element within the State and for the State as a whole. How often such a budget is required is specified in the State civil defense law or plan.

The periodic budget and continuing accounts constitute a survey of the State's civil defense resources. The accounts would specify funds and property, and whether property is owned by the State, has been donated to the State, purchased by the State with Federal matching funds, purchased or appropriated by the State, or assigned to the State by related groups. The breakdown of these funds and property into functional areas and levels of the civil defense organization provide a survey of the State's current and projected emphasis in policy.

The financial summary for the fiscal year 1963 for the

Responsibility  
for account  
and budget

Budget and  
accounts  
as  
survey

Federal  
financial  
summary

Office of Civil Defense is reproduced in the "Instructor's Guide"  
to illustrate this point.

As mentioned in the preceding section, the State Civil Defense Agency may also retain the responsibility for making all payments.

Similar tasks are performed by each State Civil Defense Service for its own area of responsibility. Each Service not only maintains its own accounts and prepares its own budget, but may also make payments within the Service and request payment from the State Civil Defense Agency, either directly or through the State Civil Defense Fiscal Service. Also, each Service must perform related fiscal tasks, perhaps through an administrative section of the Service, such as maintaining fiscal records and files, preparing fiscal correspondence and receipts, and providing fiscal reports. Funds and credit for resources required for the Service's emergency operations and other necessary activities are obtained by request to the State Civil Defense Agency or the State Civil Defense Fiscal Service.

Fiscal tasks  
of each  
Service

All of these fiscal tasks of each Service are essential but must, because of the pressure of the Service's emergency

operations, decrease in criticality during emergency time phases.

The technical aspects of these tasks may be actually performed by a fiscal officer within the State Civil Defense Agency or a State Civil Defense Fiscal Service. This Service may prepare fiscal reports, including budgets, for all elements of the State's civil defense organization; or the Service may assist the State Civil Defense Agency and Services in their performing of this task and may, then, consolidate the reports or budgets of the various elements.

Technical assistance in fiscal tasks

In a similar manner, the Fiscal Service may perform or assist in the performance of all accounting activities for civil defense within the State. The Fiscal Service may establish for the State Civil Defense Agency and Services necessary controls of expenditures to keep within budgets. The Fiscal Service may provide auditing services to the Agency and Services. Such an audit would cover all property, bills, claims, receipts, monies, and during a declared emergency, funds and property seized under the extraordinary legal powers of the Governor.

The actual disbursement of funds and credit may be

**4B**  
**Fiscal**  
**procedures**

delegated to the State Civil Defense Fiscal Service. This  
Service may approve requisitions for payment.

For the Fiscal Service, as for the Agency or for each of the Services, fiscal tasks diminish in criticality during the emergency time phases. However, the task of accounting for civil defense resources remains relatively high in criticality during all time phases.

Federal Assistance, Mutual Aid,  
and Military Assistance

The conditions under which a State and its political jurisdiction may accept and receive Federal assistance, must be defined by the State legislature as a part of State law. These conditions may, for example, allow Federal resources to be accepted, at the discretion of the Governor, as gifts, grants, or loans. The State law may state that the Governor may procure and store these resources before an emergency for the use of the State Civil Defense Services during an emergency.

Legislative basis

In the definition of an emergency, the State law must be explicit as to whether this definition includes natural disasters. The State civil defense law may, with such an extended definition of an emergency, allow the Governor or the State Civil Defense Agency, acting for the Governor, to receive Federal surplus property, relief, and assistance during natural disasters. Other forms of Federal assistance may require further specific legislation.

Definition of emergency and natural disasters

At the Federal level, Federal matching funds are allowed to the States, Territories, and Possessions by authority of Public Law 920, 81st Congress, as amended by Public Law

Federal authority

85-606. Public Law 655, 84th Congress, authorized in 1957  
the donation of Federal surplus property for use in any State  
for civil defense purposes. The Office of Civil Defense has  
proposed legislation to allow the provision of other forms of  
Federal assistance, such as Federal guidance in planning and  
in natural disasters, rather than only in wartime disasters.

This distinction is unreal and arbitrary when viewed from the local level of operations. Its removal will increase opportunities for the Federal Government to strengthen state and local civil defense. It also recognizes that the public has a right to a peacetime return for its civil defense efforts.

Other forms of Federal assistance are authorized in the Federal  
civil defense law. The Office of Emergency Planning and the  
Office of Civil Defense may commit the civil and military re-  
sources of the Federal Government to the States. This commit-  
ment may be delegated to the appropriate Federal departments  
or agencies as the exercise of their extraordinary legal powers  
or at the discretion of the President and consistent with the  
requirements of the Department of Defense.

The basic objective of all Federal assistance programs and activities is to help State and local governments develop effective civil defense capabilities, especially fallout shelters for all their citizens. In consonance with current OCD policy during fiscal year 1962, major emphasis was on community shelters and on programs and activities to make effective use of fallout shelters.

Federal  
policy  
emphasis

At the Federal level, a concerted effort has been made to provide assistance in the shelter program. The results of this effort are providing valuable experience on the relationships between the different levels of Government in furthering all civil defense programs:

We need to demonstrate to responsible officials and managers around the country that planning civil defense around complete shelter systems has the tangible support of the Federal Government and it is likely to be accomplished over a period of time. We need experience in providing federal assistance and technical guidance for new shelter development in ways which build up local responsibility and avoid undue involvement of the Federal Government in local affairs. We need to know how much response will be generated by a reasonable federal offer. In short, it would be wise to walk before we run and to learn more about the problems of a joint enterprise of the Federal Government, the State governments and the localities in meeting the shelter deficiencies which have ~~now~~ been defined by the highly productive shelter survey.<sup>3</sup>

**4C**  
**Federal assistance procedures**

Experience in any one such program will, of course, develop the ability of the various levels of government to work together. Within the State, the State Civil Defense Agency is the group most affected, since it has the responsibility, for the State, of requesting, receiving, and distributing Federal support for all civil defense groups within the State. This is a responsibility of continuing criticality. For the maximum use of all available Federal resources, it is necessary that this responsibility be carried out in a fully coordinated manner.

**State responsibility**

Other criteria must be considered by the State level of civil defense in coordinating such requests for Federal aid. It is necessary, for example, that the groups requesting assistance meet certain organizational requirements specified at the Federal level to qualify for such assistance. According to all applicable Federal and State regulations, the eligibility of the requesting groups must be shown in the requests. In approving requests and allocating assistance, it is necessary to consider the civil defense needs of the requesting groups. In particular, it may be necessary to show in the request that Federal as-

**State criteria**

4C  
Federal  
assistance  
procedures

sistance is being requested because appropriate resources within the State are depleted. It may be necessary under the relevant State and Federal law to show that the appropriate emergency situation exists within the geographical area of the requesting group.

The specific objectives according to which Federal assistance is provided may, on the other hand, originate at or apply at the Federal level. The Office of Civil Defense may carry out specialized programs, such as the shelter program, in response to current Federal policy. It may provide Federal assistance to the States in order to coordinate a specific program or all programs as a nationwide effort. It may provide technical assistance in specific fields when it has established that the States cannot provide technical information for themselves. Or the Federal level may assist the State civil defense programs in specific functional areas which it believes to be weak areas or in which it believes encouragement is required.

The specific tasks of processing and forwarding requests and distributing support may be delegated by the State Civil Defense Agency to a federal assistance officer

Federal criteria

Technical responsibility

within the Agency or to a State Civil Defense Federal Assistance Service, as is appropriate to the needs of the State. Here, these specific tasks will be discussed as if performed by a Service.

Processing Federal assistance requests from State to local Civil Defense Agencies and Services may involve either receiving such requests or actually preparing the requests for these groups. In either case, the requests must be processed to check their consistency with the appropriate regulations.

Transmission of Federal assistance requests to the Federal level may be by way of the State Civil Defense Agency and its Director and the regional level of the Office of Civil Defense. These regional level offices and the Federal level headquarters office were reorganized in 1962 to allow for more coordinated treatment of these requests.<sup>4</sup> This task implies more than mere transmittal. It is necessary to maintain liaison with the appropriate Federal groups to coordinate and negotiate matters related to the request.

Processing requests

Transmission of requests

Distribution of Federal assistance may be according to allocation plans recommended by the State Civil Defense Federal Assistance Service. The final decision on allocation is usually made by the State Civil Defense Agency and its Director.

Distributing assistance

All specific tasks related to Federal assistance continue at a rather constant criticality through all time phases except for a decrease in criticality during the attack and shelter time phase. Distribution of Federal matching funds is more pronounced in criticality in the earliest time phase, as compared to distribution of Federal surplus property and of other types of Federal assistance.

The various State Civil Defense Services request Federal assistance in their specialized fields. From this point of view, this, too, is a task which is constant in criticality through the different time phases, except for decrease in criticality during the attack and shelter time phase and in the final recovery time phase.

Specialized requests

Provision of Federal assistance in response to such requests will, of course, depend upon an appropriate level of current appropriations, made by the Federal Legislative

Appropriations limitations upon requests

Branch. To illustrate this point, Congress appropriated on September 25, 1962, \$113 million for the Office of Civil Defense for fiscal year 1963 against a request of \$235 million. This cut results in forcing the Federal level to deny some of the requests of the States.

The types of assistance that are being provided by the Federal government include technical assistance and guidance, training and education, matching funds or financial assistance, surplus property, and emergency supplies and equipment.<sup>5</sup> The functional areas that are emphasized in each of these types of assistance depend on current Federal policy as to civil defense. When Federal policy changes, a part of the Federal effort in each of these types of assistance must be in informing the State to local civil defense groups of the details of the new policy and its implications for their responsibilities. For example, technical guidance in the form of policy direction was given in a special briefing to State Governors and Civil Defense Directors on new civil defense program developments, followed up by directions issued to local officials by these persons on new policy, and meetings for local officials in this new policy held by Office of Civil Defense regional personnel.

Types of  
Federal  
assistance

Technical guidance material was published by the Office of Civil Defense, in fiscal years 1962 and 1963, in the fields of planning and organization, revision of survival plans, community shelters, shelter management, law enforcement, rural civil defense and other fields. Regional public works seminars were held to prepare guidance materials. Special policy guidance and supervision was provided for the shelter survey program. As is evident from this emphasis, technical assistance was considered to be the basic requirement for the competent execution of the complex but essential National Shelter Program.

Federal assistance in the form of training and education, also, was reoriented toward current priorities. Training will be discussed in a separate lesson.

Financial assistance under the Disaster Relief Act for areas found by the President to have suffered a major disaster is, as in the past, administered by the Office of Emergency Planning in the Executive Offices of the President.

Financial assistance under the Federal Civil Defense Act of 1950, as amended, for supplies, equipment, facilities, training, and personnel and administrative costs is made

available to State and local governments by the Office of Civil Defense. In the fiscal year 1963, approximately \$14.5 million was obligated for supplies, equipment, training, and facilities, of which \$7.7 million was for emergency operating centers. Approximately \$12.9 million was made available for essential personnel and administrative costs. To illustrate the extent to which this program assists civil defense on a nationwide basis, in 1963, all States, the District of Columbia, Puerto Rico, Guam, American Samoa, and the Virgin Islands, and more than 1,200 of their political subdivisions participated in the program of receiving personnel and administrative costs, where, according to available staffing plans, these costs involved approximately 5,000 paid State and local employees performing civil defense functions.

Surplus property has been donated to the State and local governments, under Public Law 655, 84th Congress, in fiscal year 1963, including trucks, electric generators, fire fighting equipment, communications equipment, and other property. The value represented by this property, for this one year, was approximately \$22 million.

Surplus  
property

Emergency supplies and equipment under the direction of the Office of Civil Defense are stored in strategic locations throughout the Nation, available for local emergency uses. For example, 45 ten-mile units of engineering equipment, valued at more than \$10 million, are stored in 19 locations. Radiological defense equipment, valued at \$24.7 million and chemical and biological defense equipment, valued at \$1.8 million, was included in fiscal year 1963 inventory. Medical supplies were made available through the Department of Health, Education and Welfare.

<sup>1</sup> "Supplemental Statement on Natural Disasters, The Honorable Steuart L. Pittman, Assistant Secretary of Defense (Civil Defense), before Subcommittee No. 3 of The House Armed Services Committee, House of Representatives, July 10, 1963," p. 1.

<sup>2</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1962," United States Government Printing Office: 1962, p. 59.

<sup>3</sup> "Closing Statement, The Honorable Steuart L. Pittman, Assistant Secretary of Defense (Civil Defense), before Subcommittee No. 3 of The House Armed Services Committee, House of Representatives, July 11, 1963," p. 16.

<sup>4</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1962," United States Government Printing Office: 1962, "p. 59.

<sup>5</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1963," United States Government Printing Office: 1963, pp. 67-80.

**4C**  
**Mutual aid  
procedures**

An interstate civil defense and disaster compact  
signed by the Governor of California in 1951 is included in  
the Instructor's Guide as a model of mutual aid compacts.

**Model  
mutual aid  
compact**

The authority for such a compact is described in Articles 13 and 14 and in the authority described in association with the signature. Each State will, under its own laws and legislative procedures, define the authority for such compacts as fully as it considers necessary.

**Legislative  
basis**

The effectiveness of such compacts depend upon full coordination between the various States involved if the compact is interstate or upon the various political jurisdictions of the State if the compact is limited within the State. To facilitate this coordination, one possible means is a special committee of the parties involved, as is suggested in the last sentence of Article 1.

**Coordination**

The State Civil Defense Agency in coordinating mutual aid agreements and operations will be required to fund these plans and to mobilize resources to carry them out.

**Funds  
and  
resources**

The Agency will usually be responsible for checking that these agreements are consistent with State law and the State civil defense plan, whether the agreements are with

**Review**

4C  
Mutual aid  
procedures

government, military, private, or other civil defense groups and regardless of the level of the group.

When many agreements must be coordinated, the details of the coordination in terms of establishing specific responsibility, understandings, and specific operations may be delegated to a mutual aid officer within the State Civil Defense Agency or to a State Civil Defense Mutual Aid Service. Or, when the agreement in question involves not the entire civil defense organization of the State, but chiefly one of the State Civil Defense Services, the same delegation of the details of coordinating mutual aid plans and operations is made to the Service in question.

Mutual aid activities of the State Civil Defense Mutual Aid Service for all of civil defense or of certain State Civil Defense Services for their assigned functional areas of civil defense must be approved by the State Civil Defense Agency. This requirement of central approval is chiefly to prevent conflicts in preempting available resources and to assure the fullest and most effective use of available resources without jeopardizing the needs of any part to the agreements.

Central  
approval  
criteria

As an example of the operational situation that may be faced by one State Civil Defense Service and that may best be met by appropriate mutual aid agreements is that met by the

**4C**  
**Mutual aid  
procedures**

**State Civil Defense Utilities Service in providing for the most effective possible restoration of the services of the various utilities within the State. To meet this need, the State Civil Defense Utilities Service may arrange a mutual aid agreement among the various utilities companies within the State and especially among the various types of utilities, such as the electric, gas, landline, sewage, and water utilities.**

**This compact may provide that each utility or type of utility will assist the others, under the guidance of the Service, in providing manpower, materials, equipment, and supplies for such activities as maintenance, repair, and construction. The guidance of the Service is required in this mutual aid among utilities or types of utilities to weigh the needs of each type of utility and to suggest how temporary or permanent the action taken should be.**

4C  
Military  
assistance  
procedures

Currently, at the State level, the task assigned to the State Civil Defense Agency of maintaining liaison with military groups at all levels is not, per se, a highly critical task. It is, however, important that this task be carried out continuously to insure that military assistance will be promptly supplied if it is needed.

At the Federal level, this task is of considerable criticality.

Based on a new Department of Defense Directive, new plans for far more effective military support of authorities are being worked out to further strengthen the civil defense command and control structure and to back up civil defense organization.

At the State level, according to current planning, military functions within civil defense, itself, may consist of organizing a State Guard and providing military support by that or other means. When funds and equipment are provided by the Federal and State levels, the State Civil Defense Military Affairs Service may actually organize a State Guard as a highly mobile group, equipped with light weapons, to provide military support to the civil defense

State  
level

Federal  
level

State  
Guard  
organization

4C  
Military  
assistance  
procedures

organization of the State. The organization of the State Guard will depend upon the amount of funds and equipment made available, the availability of other military support to the State, and basic characteristics of the State, such as its population and geography.

The actual provision of military support to the civil defense organization of the State is contingent upon several formal conditions. The Governor may declare a state of martial law within the State or in certain areas of the State as a special form of his declaration of a state of extreme emergency. Requests for military support must have been officially received through normal channels, from the State, county, or local Civil Defense Agencies or Services. These requests must be approved by the commanders of the military group in question, and task or mission type orders must be relayed to the military group. The proper military group must be used according to the following conditions.

Before the National Guard is committed to Federal or other use by Federal authorities, military support may be provided by the National Guard, commanded by its

Conditions  
for military  
support

National  
Guard

Adjutant General, who is directly responsible to the Governor.

In a state of martial law, the Adjutant General becomes the superior officer of the State Civil Defense Director. The National Guard may facilitate its support of the civil defense organization by maintaining liaison personnel in area civil defense emergency operating centers.

If the National Guard is committed to other duties, or if their support is insufficient to meet the need, military support may be provided by Federal military groups stationed within the State, or deployed to the State if their other duties permit.

Federal  
military  
groups

If neither of these sources of military support is available or is sufficient, the State may, then, organize a State Guard within the State Civil Defense Military Affairs Service and provide by this means military assistance to civil defense groups. This group will operate as long as it is able to function and until the other military groups are available within the State.

State  
Guard

Military support will be provided when necessary to insure the safety of the public and to insure public law

Criteria

4C  
Military  
assistance  
procedures

and order. Military assistance may, also, be provided for  
the security of vital installations and resources.

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1 "Closing Statement, The Honorable Stewart L. Pittman,  
Assistant Secretary of Defense (Civil Defense), before Sub-  
committee No. 3 of The House Armed Services Committee,  
House of Representatives, July 11, 1963," p. 12

Manpower, Supply, Transportation,  
Engineering, Institutions and In-  
stallations, and Utilities Support

The different types of resources which must be made available to all elements of the civil defense organization to support its operations include manpower, supplies and equipment, transportation, engineering, installations, and utilities. In this same group should be also considered communications. However, since civil defense communications are considered primarily as a nationwide system and only secondarily as a supporting function, communications support will be discussed as an aspect of the communications system in a later lesson.

In each of these resources functional areas, the primary responsibility of the State Civil Defense Agency may be delegated to a technical officer or Service.

Responsibility

All personnel and manpower actions within civil defense are carried out under the supervision of the State Civil Defense Agency. Where, for example, Federal financial assistance is requested for personnel costs, it is required that the organizational elements conform to the Federal merit system.

It is, also, required that manning organizational charts be submitted for each organizational element. This requirement is closely related to the primary responsibility of the State Civil Defense Agency in setting up and implementing the organizational aspects of civil defense. These manning charts must be maintained current and complete for all of civil defense within the State and can serve as a means of assessing the extent to which the manpower resources of the State are ready for an emergency.

Within each State Civil Defense Service there is an analogous requirement for recruiting manpower, assigning their civil defense duties within the organization of the Service, and maintaining manpower records. In the task of recruiting manpower, the Service may request assistance from the State Civil Defense Manpower Service for persons possessing specialized skills. These tasks are critical, not

Responsibility  
for personnel  
actions

Personnel  
directories

Manpower  
actions in  
each  
Service and  
manpower  
assistance

only in the time periods before attack, but also in time phases after attack. With some elements of the civil defense organization on a "skeleton staff" basis, recruiting and assignment may have to continue well into the critical tension time phase. As new manpower needs arise after an emergency, either because of unforeseen emphasis on certain operations or because of the unavailability of pre-assigned manpower, recruiting and assignment will be continued through the initial recovery and reconstruction time phases.

The task of recruiting personnel and assigning their tasks requires that each Service ascertain its own manpower requirements at all levels for efficient emergency operations in the various stages of warning and publish standard operating procedures for duty assignment. It will make recommendations to the State Civil Defense Agency as to its needs, and its standard operating procedures will be as approved by the Agency. Actual recruiting will be according to approved organizational tables. Appointments, per se, are made by the Governor with the concurrence of the Director of the State Civil Defense Agency.

The manpower status of the Service should be checked

Proced  
in each  
Service

Criter  
in each  
Service

s  
as to its completeness at the beginning of the critical tension time phase. This status must be kept current and adjusted as necessary according to the competence of personnel, the availability of personnel, and the internal organizational requirements of the Service. Individual assignments must be revised immediately as the actual duties of the individual change. Groups of assignments may require progressive modification due to technological changes, current intelligence, revised assumptions, or other changes. Under emergency conditions or in certain time phases, it may be necessary to augment the manning of certain organizational elements for efficient operation. This may be likely in field units. Persons may be reassigned in certain time phases as operational priorities change.

A specialized aspect of the assignment of duties is the delegation of authority, especially of the authority of the Chief of the Service. Such delegation of decision making and action taking authority may be considered necessary by the Chief to increase operational effectiveness by decentralization at the scene of field activities.

Delegation  
in each  
Service

4D  
Manpower  
procedures

All civil defense duty assignments carry the implied responsibility of the person so assigned to perform such duties and to develop and perfect his operational readiness to perform such duties.

Responsibility  
of assignee  
in each  
service

Each Service will, also, compile manpower records for all manpower assigned to or available to the Service.

Manpower  
records  
in each  
Service

Such records may be based on periodic surveys of the manning status of the Service, made twice yearly, for example.

Such records would be published by the Service and a copy filed at all appropriate levels of the Service's headquarters and at the civil defense emergency operating centers. These records must be kept complete and current. The personnel involved include the regular staffs of the Service, at all

levels, and all personnel available throughout the State from other related groups except the military. The form of the records should be such as to include the following types of information in summary form as appropriate to the Service:

name, address, phone; location mapped by county and locality; titles, assignments, functions, duty, position within the organization; succession of direction and control; status of availability for civil defense operations; training and other qualifications; seniority or experience.

**4D  
Manpower  
procedures**

The State Civil Defense Manpower Service maintains similar records for all civil defense groups within the State.

The Service may provide its technical assistance to these groups by means of specialized installations within the Manpower Service in the form of manpower clearing offices.

An especially important technical task of these offices is to determine or estimate the manpower requirements of each element of the civil defense organization and to make associated determinations or estimates of available manpower resources. Information for such determinations or estimates may be made available by damage assessment reports, labor market information, and other information collected and analyzed by the staff of the Manpower Service at all levels. The information may include numbers (both as shortages and surpluses), locations or other distribution data, and skills and other factors concerning the efficiency or occupational composition of the available resources. Necessary manpower availability information may be secured from the registration and identification files of the State Civil Defense Registration Service. Registration information concerning persons located in shelters near

**Over-all  
manpower  
records**

**Manpower  
clearing  
offices**

**Determining  
manpower  
requirements**

critical operating facilities would be valuable in making people available for the continued operation of power systems, water works, plants which could not be effectively shut down, hospitals, and communications centers. Recovery from a nuclear attack will be assured in large part by increasing the proportion of the population that would survive the first few weeks of such an attack and that would, therefore, be available to participate in recovery actions.

The provision of manpower to all elements of the civil defense organization within the State is, of course, the key task of State Civil Defense Manpower Service. This task involves recruitment, registration or classification, assignment or allocation, and deployment.

The aim of this task is to make maximum, economic, and appropriate use of all available manpower according to the needs and priorities of the requesting elements of the civil defense organization. The task must be carried out according to State civil defense plans and procedures, according to civil service regulations in collaboration with the Civil Service System, according to military requirements when its conduct is assisted by the Selective Service System and, of

Providing  
manpower

Criteria

course, according to the merit system or other standards of the State when the task is assumed by the State Government's Department of Employment. The available manpower considered includes all persons not otherwise assigned by the State civil defense plan including unassigned members of the public, the work force, and evacuees.

All of these manpower supply tasks are high in criticality during the preparatory and critical tension time phases and during the initial recovery and reconstruction time phases.

Only the task of compensating civil defense manpower for the duties they have performed may be deferred to the reconstruction and final recovery time phases. Such compensation may include regular payment for tasks performed or it may include other related benefits provided by the Federal or State Governments as emergency adaptations of their normal unemployment, insurance, death, or other payment authorizations. For example, the appropriate civil defense law may provide for unemployment benefits when idleness was due to enemy destruction of working places.

Compensation

Supply tasks performed by the State Civil Defense Agency pertain especially to procuring and storing supplies and equipment for the emergency operations of the State emergency operating center. Supplies for the different State Civil Defense Services are the responsibility of each Service, assisted by the State Civil Defense Supply Service. The over-all technical responsibility for all civil defense supplies is delegated to the State Civil Defense Supply Service and to the specific Services for certain specialized technical supplies and equipment.

Each element of the civil defense organization, the Agency, the Services, and the Supply Service will carry out these supply tasks according to certain criteria. First, they must provide the supplies that are essential for their own emergency operational requirements, including both general supplies and the specialized technical supplies needed uniquely for their own operations. Second, they must give particular attention to supplies and equipment that are not normally available within the State or are not locally procurable. Third, they must follow their own approved equipment tables, general and supply standard operating procedures.

**4D**  
**Supply**  
**procedures**

and legal limitations, as well as special procurement procedures. These procedures should be designated in the State civil defense plan. Certain supplies and equipment should be strategically located for emergency accessibility. Others should be provided in duplicate. All supply tasks must, of necessity, recognize the limitations of the availability of funds, the anticipated or actual state of emergency conditions, the alleviation of shortages that may or do hinder their operations. The criterion of interchangeability should be emphasized.

Within each State Civil Defense Service, the related tasks of procuring, storing, maintaining, assigning, and distributing supplies to the various elements of the Service are high in criticality during the normal preparedness, critical tension, post-attack, and initial recovery time phases. The secondary task of obtaining additional supplies and equipment from the State Civil Defense Supply Service and related groups possesses high criticality in the initial recovery and reconstruction time phases, when supplementary supplies and sources of supply are most likely to be required.

4D  
Supply  
procedures

As with most resources tasks, each State Civil Defense Service is expected to use, first, its own supply stocks, then to use those of related groups, and finally to request additional stocks from the Supply Service only when these sources are depleted, insufficient or unavailable. Supply requests are made as requisitions at the local level and filled, when possible, at the originating level. Special request procedures may be required for certain forms of procurement such as leasing, which may be processed through the State Civil Defense Agency. When supplies or equipment are provided by related groups, the groups may provide these resources only insofar as their facilities and circumstances permit. They are, however, usually urged by the Governor to make such resources fully available to those Services which require them for the proper operation of civil defense activities in carrying out the State civil defense plan. When related groups provide supplies, they may retain control over them.

The task of supply within the Service includes the sub-tasks of procurement, storage, maintenance, assignment, and distribution. Also, the supply task implies determining the Service's requirements, ascertaining possible sources

Procedures  
in each  
Service

Sub-tasks  
in each  
Service

especially for post-attack time phases, and planning and publishing standard operating procedures for the internal supply of the Service. In general, the types of supplies involved may include equipment, instruments, spare parts, and replacement assemblies, physical facilities such as power sources, fuel and lubricants, maintenance items, and other items.

The technical supply tasks performed by the State Civil Defense Supply Service hold at a high criticality through all time phases, with a relatively small drop during the attack and shelter time phase. The high point in the criticality of supply tasks appears to be in the reconstruction time phase. However, distribution of supplies is relatively high in criticality in the preparatory and critical tension time phases as well.

Although the State Civil Defense Supply Service may in some States perform all supply tasks, in certain States the supply of specialized supplies may be assigned to the appropriately technically qualified Services. In this case the Supply Service coordinates these specialized supply activities with its own over-all supply operations. Such

Specialized supplies

specialized elements of the supply organization may include a fuel supply service and a food supply service. Further, for example, the traffic control stations of the State Civil Defense Police Service may provide fuel to civil defense convoys, since they come most often into contact with this need. The State Civil Defense Medical Service is usually responsible for all medical, hospital, and first aid supplies for all civil defense elements. Especially, the Medical Service may coordinate the Red Cross blood program. For specialized supply assignments, criticality will be more a function of the time phases in which this type of supply is needed than of the need for supplies as a generality. Therefore, for example, the criticality of all fuel supply tasks is high only in the initial recovery and reconstruction time phases, presumably because fuel supplies are readily available from public sources before attack.

Returning to the over-all supply problem, the Supply Service, like all Agencies and Services, follows the procurement and fiscal procedures discussed above.

In its task of procuring civil defense supplies, the Supply Service acts according to requests received from the

Over-all supplies

Obtaining supplies

State Civil Defense Agency and Services and obtains supplies from the sources discussed, above, such as Federal assistance or mutual aid agreements.

Supply storage implies the maintenance of stored supplies. Also implied is the requirement to stockpile certain supplies strategically within the State. Storage must be appropriate to the location of supply depots or distribution centers.

Storage

Before attack in the critical tension time phase and after attack in the initial recovery and reconstruction time phases, supplies must be protected from attack or disaster effects and from illegal diversion under the stress of high demand. Supply routes may require special protection. Salvage operations may be required by impending threat to the supplies or by unusually heavy demands for supplies, assuming that these supplies are accessible and movable

Protection  
and  
salvage

Allocation of supplies will be guided by availability, excesses and shortages, and the criticality of the supplies. This task is usually performed under the supervision of the State Civil Defense Agency and, to the extent possible, according to the pre-established needs of the State Civil De-

Allocation

4D  
Supply  
procedu

fense Services as published in the State civil defense plan.

The task of allocation may include the special case of supplying alternative and less critical or more readily available supplies to certain requesting groups.

Distribution may become highly critical as a task. The general problems involved in all civil defense movements and discussed in an earlier lesson apply to this task of moving supplies to areas where they are needed. Close coordination with other civil defense groups may be required to avoid impeding other civil defense operations. Undeliverable supplies or those not needed in one area should be diverted to the areas where they are needed.

Distrib

4D  
Transportat  
procedures

The technical task of providing the transportation re-  
sources required by the civil defense organization is usually  
delegated by the State Civil Defense Agency to the State Civil  
Defense Transportation Service. Thus the Agency, like the  
several State Civil Defense Services, fills its own trans-  
portation needs beyond its own capabilities by request to the  
Transportation Service.

Responsibili

For the Agency, the task of obtaining transportation  
assistance is of fairly constant criticality during all time  
phases. Even during states of extreme emergency, key  
personnel in the State civil defense emergency operating  
center may require transportation to carry out their control  
of operations. The tasks for each State Civil Defense Serv-  
ice of obtaining transportation assistance, providing trans-  
portation within the Service, and controlling its own trans-  
portation equipment are critical chiefly during the initial  
recovery and reconstruction time phases, when trans-  
portation resources will be in most demand and in least  
supply.

In general, each Service will reserve its specialized  
transportation equipment for its own use and will control such

Control by  
each Serv-  
ice of its  
equipment

equipment. The Service may, of course, delegate the control of such specialized equipment. As an example, fire fighting equipment is so specialized a use and is so essential to this specialized use that its control is best confined to the State Civil Defense Fire Service. The Service may, however, when fire fighting operations are completed, make such equipment available to other Services, for example, to assist in de-contamination washing operations.

In addition to such specialized equipment owned, operated, and/or controlled by each Service, each Service may have transportation equipment made available to it by related groups. For example, specialized milk tankers of the private food industries may be made available to the State Civil Defense Food Service. Or, the State Civil Defense Engineering Service may have made available to it the extensive transportation equipment and facilities of the State government's Department of Highways, including district offices, maintenance buildings with shop facilities, motor vehicles, and other equipment and resources. Under these conditions, the equipment usually continues to be controlled by the owners and, in some cases, operated by them.

Provision  
of equip-  
ment by  
related  
groups

4D  
Transportation  
procedures

All Services may make use of privately owned transportation as necessary to accomplish their missions. Again, such equipment may be controlled and operated by the owners. The fullest use should be made of public transportation means.

Provision  
by public  
transportation

Additional transportation assistance will be provided, upon request, when other sources are depleted or are insufficient by the State Civil Defense Transportation Service, usually at the local level or at the level where the need exists. This assistance may consist of vehicles, operators, gas and oil coupons, road and traffic information, car pools, or specialized or adaptable equipment. Transportation may be required for personnel, equipment, or supplies. As appropriate, requests should state estimated volume and weight requirements.

Request  
procedures  
for  
additional  
transportation

Provision of transportation within a Service involves determining needs, careful planning, obtaining and allocating transportation, replacing or maintaining transportation, and, of course, operating assigned transportation. It may be necessary to specify in the Service's Annex to the State plan the details of specialized equipment. It should be noted that, especially for specialized equipment, planning for inter-

Provision  
within each  
Service

4D  
Transportation  
procedures

changeable use is important. By this and other means such coordinated assignment of available transportation, transportation shortages can be alleviated.

The technical tasks of obtaining and providing civil defense transportation resources, performed by the State Civil Defense Transportation Service, and of maintaining civil defense transportation resources, performed by the State Civil Defense Transportation and Engineering Services are most highly critical during the initial recovery and reconstruction time phases. Maintenance will, of course, be more critical immediately after attack.

The State Civil Defense Transportation Service may obtain transportation from governmental and private groups within the State, including the public transportation industries. For various of these groups, the State civil defense plan may state policies, procedures, and limitations that must be observed in obtaining and using such transportation. In general, control by the group owning and operating the transportation will be displaced as little as is possible and transportation will be returned to their control as soon as possible. The types of transportation equipment, supplies, personnel, and facilities obtained include air, highway, pipeline, marine, and railway.

Authorized use of each of these types of transportation

Over-all  
technical  
tasks

Obtaining  
transportation

4D  
Transportation  
procedures

may require conforming to all appropriate Federal and State regulations.

Provision of transportation assistance to civil defense groups implies close liaison with these groups to anticipate and meet their essential requirements, in the fullest and most efficient manner.

Maintenance of transportation resources involves, not only repair of vehicles, but also emergency repair and temporary replacement of essential transportation routes damaged or destroyed by enemy attack or natural disaster. Such routes or route facilities may include docks, bridges, railroads, airstrips, or highways. In carrying out these diverse tasks, the State Civil Defense Engineering Service may receive technical advice and assistance from the appropriate departments or agencies of the State or Federal Governments. For example, advice and assistance on port facilities and operations may be provided by the Federal Maritime Commission or by the State Port Authority or the State Navigation Commission.

Providing  
transportation

Maintenance  
of  
transportation

4D  
Engineering  
procedures

Engineering support to civil defense operations may include surveying and mapping, inspection, specialized operations such as flood control, debris clearance, and construction. The tasks related to surveying and mapping and to inspection are critical to the civil defense effort chiefly in the preparatory and the recovery time phases. Flood control and debris clearance tasks are critical in the initial recovery time phase. Maintenance and construction are most critical in the reconstruction time phase.

Over-all  
technical  
tasks

Technical surveying and mapping may be required for civil defense efforts in many areas. The State Civil Defense Engineering Service is responsible for procuring or producing such data, assuring that it will be available for emergency operations if necessary, and distributing this data in the form of maps, map substitutes, navigational charts, air photographs, and the like. This task must be carried out in coordination with the State Civil Defense Intelligence Service.

Surveying  
and  
mapping

The Engineering Service may, also, be requested to perform field inspections for other civil defense groups. For example, such inspections may be required as evidence of

Inspection

**4D**  
**Engineering  
procedures**

need to allow such groups to apply for financial assistance to repair damage.

Specialized technical engineering tasks, such as flood control tasks, will be required in an emergency. Such tasks, usually carried out by the appropriate State Government departments or agencies, will require special assistance in engineering techniques appropriate to war-caused disasters.

The primary tasks of the State Civil Defense Engineering Service are debris clearance and construction.

Debris clearance is especially important in the immediate post-attack time phases to all such emergency groups as the State Civil Defense Fire, Rescue, and Utilities Services passage through obstacles to obtain access to damaged areas. In similar operations, it may be necessary to demolish, remove, or shore up unsafe and hazardous structures.

Later, construction tasks will consist of repairing replacing, and maintaining structures, and buildings that have been damaged or destroyed and that are essential to the community. Such structures may include warehouses, defensive works, barriers, and the like.

**Specialized tasks, such as flood control**

**Debris clearance**

**Maintenance**

Each State Civil Defense Service will request engineering assistance from the State Civil Defense Engineering Service, usually making the request at the local level, when the engineering problems that arise within the particular Service are beyond the capacity of each Service to meet. For example, the State Civil Defense Fire Service may request engineering assistance in clearing debris or wreckage, constructing firebreaks, providing demolition experts, heavy equipment, or temporary water supplies. The State Civil Defense Police Service may request assistance in erecting traffic signs and barricades, maintaining roads and highways, constructing detours, repairing bridges, or removing obstacles from roads and highways.

A group of resources that are highly essential to civil defense activities are the specialized installations within the State and the personnel attached to them. As a critical resource, the status of those installations which are assigned to or related to civil defense within the State should be reviewed by the State Civil Defense Agency. These installations include all assigned or available government and private installations, with their facilities and personnel, all specialized civil defense installations, and all military installations to the extent that they may be available to civil defense. Also, included are specialized care institutions whose status during an emergency must be protected and which, therefore, may be made in particular States the subject of special civil defense regulations. To illustrate the inclusiveness of such a list, the following types of installations may be included: industries, utilities, schools, hospitals, correctional institutions, public gathering places, restaurants, media, and controlled dams, highways, and bridges.

The tasks of protecting, inspecting and maintaining in-

Responsibility

installations may be delegated to a State Civil Defense Institutions and Installations Service. In addition, certain Services may perform these tasks for installations assigned to them or available to them; for example, the State Civil Defense Medical Service may carry out these tasks for all government and private hospitals within the State, with non-medical technical assistance from the Institutions and Installations Service.

Throughout all time phases, except for the final recovery time phase, this Institutions and Installations Service or other appropriate Services must protect personnel and facilities in installations assigned to or related to them. The aim of this task is to minimize loss and damage to personnel and facilities and to protect life and property. In some cases, the aim of this task is to avoid control problems that would result if certain types of persons, such as criminals or the seriously ill, were released from institutional control and care. In other cases, the work force and the plants of certain institutions are essential for the immediate civil defense and military effort and for recovery operations and

Protection  
of  
personnel  
and  
facilities

**4D**  
Institutions  
and  
installations  
procedures

accordingly must be protected from the effects of enemy attack or natural disaster. Critical installations, such as ports, may require special protection by such groups as the National Guard, the State Police, or the State Civil Defense Police Service. Any facility where the public may gather, either temporarily or for long periods of time, requires such protection. Schools are the primary example of such a public gathering place.

Safety inspections of all such installations may be conducted by the State Civil Defense Institutions and Installations Service, especially during the preparatory time phase and the initial recovery and reconstruction time phases.

Specified State Civil Defense Services, such as the Utilities Service, may maintain installations closely associated with their emergency missions, such as in this example, all utilities. For all other installations of special interest to civil defense, the State Civil Defense Institutions and Installations Service may repair, replace, or relocate the facilities of the installations. This task is of highest

Safety  
inspections

Maintenance  
of  
installations

criticality during the reconstruction time phase. The aim of this task is to restore the essential disrupted services of the installation. For example, it may be necessary to relocate the facilities and the organizations of industries within the State which are essential to the civil defense and military defense effort in order to make it possible for these industries to resume production.

4D  
Institutions  
and  
installations  
procedures

The basic task in providing utilities support involves operating the utilities within the State and distributing their services throughout the State. This is the normal task of the existing utilities within the State. ~~as criticality for civil defense is highest in the initial recovery and reconstruction time phases.~~ In the preparatory time phase, the low criticality can be interpreted as indicating that utilities are being operated and their services are being distributed in the normal manner.'

A secondary task is, of course, maintaining the facilities of these utilities. This task is of highest criticality during the attack and shelter and initial recovery time phases.

The State Civil Defense Utilities may conduct these tasks or it may only coordinate the existing utilities in their conduct of their normal tasks under emergency conditions. In these comments, it will be assumed for convenience of expression that the Service performs the tasks.

The high criticality of the task of maintaining

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cedures  
  
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utilities in the attack and shelter time phase, which is unusual for civil defense tasks as a whole, reflects a special requirement for this Service that the on-duty staff of the Utilities Service must, upon receipt of a take cover signal, implement emergency shut down procedures. Immediately after an attack, the Service will initiate maintenance activities to repair or replace, at least temporarily, the essential facilities of any utilities which have been damaged or destroyed, which are overloaded by increased post-attack demands, or which have been contaminated by direct or indirect attack effects or by overloading. To illustrate, the State Civil Defense Utilities Service may be required to supply water, in some cases purified water, in damaged areas for the public, for livestock, for fire fighting, for hospitals and first aid stations, for sewage disposal, or for fallout decontamination; or the Service may be required to provide temporary auxiliary water sources in undamaged reception areas where the normal water utility facilities have been overloaded by greatly increased populations.

The normal task of operating utilities and distributing their services becomes highly critical during and immediately

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after an emergency or disaster. This task is coordinated by the State Civil Defense Agency and its priorities consider the need to support the operations of all State Civil Defense Services according to the urgency of their needs.

Training

The primary responsibility for training in civil defense is held by the State Civil Defense Agency. The Agency is assisted in this responsibility by the State Civil Defense Training Service or by a training officer on the staff of the State Civil Defense Agency. This training officer or Service provides the professional competence in the field of training required to carry out the Agency's extensive training program. The Agency is further assisted by each State Civil Defense Service in that each Service trains its own personnel and trains other related groups in the specialized functional areas assigned to the Service.

The objectives of civil defense training must be well defined since the required training program is extensive and covers many general and specialized areas. Currently,<sup>1</sup> in terms of who is to be trained, civil defense training objectives emphasize: first, training key leaders who are responsible for civil defense plans and operations; second, training skilled civil defense workers; and, third, educating the public. Currently, the specialized fields that are emphasized in training are plans and operations, shelters, and radiological defense. Training in these and other specialized fields is discussed, below.

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For all civil defense training, the general criteria are the same. All civil defense personnel must be trained both in their current standby activities and in the acitivities that will be required of them under emergency conditions. To further this aim, training will be conducted under normal leadership and will consider the emergency situation when that portion of the civil defense organization to which the person is assigned is operating with greatly expanded divisions. Training will cover all time phases so that operations appropriate to each time phase can be started quickly. Further, training should consider various types of threat, such as natural disasters and enemy attacks. Training should be conducted under various conditions to improve the flexibility and appropriateness of the training to application in varied situations of weather, season, time of day, equipment, communications, and the like. In general, the training should be as extensive as is necessary to fully prepare personnel for effective operational performance. Especially, training for effective operations emphasizes integrating staff elements into functioning, cohesive, and efficient teams. To achieve this, each person will require both general and specific training. In the civil defense activities of other

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groups at other levels, the training may be general. Each person will, however, require specific technical training in the duties that are appropriate to his own primary and secondary assignments at his own level. In this sense, all persons related to civil defense must be generally informed as to the State civil defense plan and must be intimately acquainted with those annexes of the State plan that are pertinent to their own assignments.

Training, itself, as a task, is highly critical and its criticality is relatively constant with changing time phases. In other words, the training activity, per se, must be continued in all time phases to the extent that it is required to maintain a fully trained civil defense organization.

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<sup>1</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1963," United States Government Printing Office: 1963, p. 70.

The conduct of civil defense training is, as mentioned above, the technical responsibility of a specialized officer or Service, here, referred to as the State Civil Defense Training Service. This Service not only carries out the training program of the State Civil Defense Agency, but also performs specific tasks preparatory to following training.

In preparation for training, the State Civil Defense Training Service provides civil defense training materials. This task is concentrated, of necessity, in the pre-emergency time phases. The materials may actually be prepared by the Training Service or may be appropriately selected from other sources. This Service will be responsible for storing such materials and for distributing them. An associated task is to assure that such materials are consistent with the established policies of the Agency. This may be accomplished by requiring that all such materials receive final review and approval by the Director or plans and operations officer.

The planning of the appropriate form for specific training materials is, of course, the professional responsibility of the Training Service. For example, one

important form of training material is a training information bulletin sent to all interested groups within the State, especially to public and private schools, with the aim of developing in such groups an awareness of the need for civil defense training. Another important form of training material is the training directive which is sent to all groups within civil defense and related organizations who are carrying out specialized technical training programs. By means of such training directives, the Training Service assists specialists in other fields than training in the speciality of training. The directive may be quite detailed in guiding these groups in the techniques of teaching. Directives may be periodic. As funds are available, the Training Service may provide other forms of training materials to such groups according to their needs. Such materials may include training charts or films or other visual aids, curriculum or course outlines for both instructor and student, and training facilities, including classrooms, special structures, equipment, supplies, and the like.

The actual conduct of training, although the technical responsibility of the Training Service, may be carried out Carrying out traini programs

either by the Service or by another group with the assistance of the Service. The Service will assist in specialized training programs by training instructors in teaching techniques. In the Federally sponsored civil defense adult education program, from fiscal years 1960 through 1963, approximately 33,400 teachers had been trained and had conducted courses, by which means approximately 688,300 students had graduated<sup>1</sup> from courses.

Following training, other related tasks are required. Training exercises are conducted to test the adequacy of the completed training to the civil defense tasks assigned to the persons trained. This task is most critical in the pre-emergency time phases.

Similarly, training inspections are conducted to evaluate the progress of training programs. Again, this task is critical in the early time phases.

Based upon training programs, exercises, and inspections, training records must be maintained.

Finally, training reports are prepared and disseminated, especially in the preparatory and the initial recovery time phases, to inform all interested groups on the status of civil defense training. Such reports are dis-

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seminated by way of State to local Civil Defense Agencies.

These reports include information on the last fiscal year cumulative information including that year, and projections to at least the next fiscal year. This information may detail the areas in which training was conducted, the training means used, the number of students trained, the total cost, and related information. These periodic reports provide a valuable technique of maintaining contact with major educational organizations to secure their support and assistance in civil defense. The primary purpose of periodic training reports, however, is to provide information upon which an improved training program can be based.

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<sup>1</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1962," United States Government Printing Office: 1962, p. 62; and "Annual Report of the Office of Civil Defense for Fiscal Year 1963," United States Government Printing Office: 1963, p. 71.

A  
Special  
procedures

Training in the various specialized fields of civil defense as conducted by the appropriate State Civil Defense Services is as a task more critical in the pre-emergency time phases, whereas the analogous task for the conduct of all civil defense training by the State Civil Defense Agency and the State Civil Defense Training Service is a task of continuing criticality. This difference in the time phasing of the task's criticality may be interpreted as reflecting the necessity in an emergency for each Service to emphasize its primary operational functions over such supporting activities as training; whereas, on the other hand, the central civil defense groups must continue their careful monitoring of the status of all civil defense training through all time phases.

Specific  
versus  
over-all  
training

Of course, in the conduct of training, whether within the Service or for related groups, each State Civil Defense Service requires technical training assistance. The immediate source of training assistance is the State Civil Defense Agency, working through the State Civil Defense Training Service.

Obtaining  
training  
assistance

By this means, each Service has made available to it the major assistance of the Office of Civil Defense, provided

Federal  
assistance

through its schools, their traveling team classes, their seminars in specialized fields the Civil Defense Adult Education Program, the Civil Defense University Extension Program and other specialized programs. Especially, the Services and all civil defense groups are encouraged to participate in this training by means of Federal partial reimbursement for travel and per diem expenses of students attending OCD schools. Since this program of Federal financial assistance for training was begun in fiscal year 1960, \$467, 042 has been expended representing 7, 807 course completion certificates or approximately \$60 per student.<sup>1</sup>

The Office of Civil Defense schools include the Staff College at Battle Creek, Michigan, and the Civil Defense Training Centers at Alameda, California, and Brooklyn, New York. In the fiscal year of 1962, the Chemical Biological, and Radiological Defense School was incorporated into the Staff College as a Department of Technical Training.

In the same period, the Office of Civil Defense schools were reorganized to improve their appropriateness to current civil defense policies. The number of courses

Federal schools

Emphasis in Federal Schools

given was reduced to concentrate the available resources on courses directly concerned with the new shelter--oriented program. Training was concentrated on key leaders assigned to active roles in Federal, State, and local civil defense and on instructors scheduled to train local civil defense personnel.

The Civil Defense Adult Education Program was established in fiscal year 1960. The Office of Civil Defense provides instructor training for these courses through seminars, student manuals and instructor guides, and, of course, sets policy as to the subject matter to be emphasized in the courses. The courses are conducted through regular adult education channels and contractual arrangements with the U.S. Office of Education. The State certifies local teachers. Under State contracts, Federal funds are provided so that the students attend courses with no charge.

An extensive specialized medical self-help program was developed for the Office of Civil Defense under a contract with the U.S. Public Health Service of the Department of Health, Education and Welfare. The development of this program illustrates the cooperation of various groups in providing specialized training. The Council on National

Federal  
adult  
education  
program

Example  
of specialized  
training  
assistance

Security of the American Medical Association cooperated in the development of the course and approved its purpose and objectives. In the fall of 1961, representatives from each State met in a workshop to consider the appropriateness of the proposed course to the needs within each State. The Office of Civil Defense developed the reference manual for the course and distributed it for comment to State to local civil defense Directors and to the American Medical Association. In January of 1962, 4,385 training kits were distributed by OCD. In the latter part of fiscal year 1962, trial courses were started in each of the States. From these developments, preliminary training results have been collected and analyzed by the Civil Defense Advisory Committee on the Medical Self-Help Training Program, specially appointed for this purpose by the Office of Civil Defense. The U. S. Public Health Service, then, contracted for production and distribution of training materials and promotional information. Finally, during fiscal year 1963, approximately 788,000 persons were participating in the course. Schools, industries, and military groups are planning to use this course.<sup>2</sup>

DA  
Specific  
procedures

The Office of Civil Defense provides seminars and conferences, presented at Staff College, in the regions by means of the Civil Defense University Extension Program.

These seminars may be associated with more formal courses provided by other governmental groups, such as training in explosive ordnance reconnaissance provided by the U.S. Army. Where more formal specialized training is required by new civil defense policies, formal courses may be organized and continued until an adequate cadre of persons are trained, as is the case for the two week course in fallout shelter analysis conducted at military and civilian schools to train qualified manpower for the shelter survey.

For training in specialized fields in which specialization is required for many civil defense workers on a continuing basis and where other groups are fully qualified to provide such training, the Office of Civil Defense maintains continuing cooperation with existing qualified training groups to facilitate specialized training programs.

Federal specialized training assistance by assisting groups

The U.S. Public Health Service, then, contracted for production and distribution of training materials and promotional information. Finally, during fiscal year 1963, approximately 788, 000 persons were participating in the course. Schools, industries, and military groups are planning to use this course.<sup>3</sup>

3.A  
Specific  
procedures

Requirement  
of Federal  
training  
for each  
Service

Many States require, for example, that the officers of the State Civil Defense Agency and the chiefs and assistant chiefs of each State Civil Defense Service be trained at the Office of Civil Defense schools.

The content of the training provided by each State Civil Defense Service includes, not only training in its specialized operational functions, but also training in the necessary supporting functions. The most important type of supporting function in which all State Civil Defense Services must train their staffs, including volunteers, auxiliaries, and field units, is that of radiological defense techniques such as monitoring and radiological safety measures required by the staff for the efficient carrying out of their mission. This training is usually conducted by a radiological officer within the Service, who has been trained by the State Civil Defense Radiological Service.

The essential content of the specialized training provided for their staffs by each State Civil Defense Service is, of course, in their assigned duties. Closely related training is required in the Service's civil defense plans, regulations and rules, standard operating procedures, systems, and

Radiological  
defense  
training  
by each  
Service

Specialized  
training by  
each Service  
within the  
Service

technical equipment and the related skills. Also, as appropriate, all Services train their staffs in coordinated operation of State to local level Service headquarters, including the details of evacuating headquarters.

Each Service plans such training, conducts it according to established training requirements, and assures that the staff is maintained in a fully trained status. At the beginning of the critical tension time phase, the Service may check the training status of its staff and may, if necessary, conduct additional training on an accelerated basis to bring the staff to full capability.

For each Service, the tasks of selection and training are interrelated. Many Services will be able to select personnel who are already qualified in the specialities of the Service. The training provided by the Service is, then, supplementary. The Service must, therefore, coordinate its selection and training activities to bring about the desired result of a fully trained staff.

In another sense, coordination of training is important to the Service. The requirements that the Service provide training in its specialized field for related groups, such as

Sub-tasks  
in  
specialized  
training

Specialized  
selection  
versus  
training

Specialized  
training  
by each Service for other groups

those described in the first lesson, again demands that the Service consider the special operational needs of these groups and their current competence in establishing specialized training programs for them. For example, the State Civil Defense Radiological Service sets up quite different training programs for the following groups which it is responsible for training in radiological defense: its own staff, radiological officers in other Services, the general public, and that part of the public which is concerned with farming and stock raising.

The training that it provides to each Service will vary.

Certain Services conduct radiological monitoring and reporting. Other Services conduct radiological decontamination operations. Others are responsible for protecting supplies from contamination. Thus, this Service and, in a similar manner, all Services must fit specialized training programs to the needs of the groups being trained.

Many Services provide training to the public. Such training is a critical aspect of preparing the public for co-operation with civil defense during emergencies and of preparing the public for self help and community help during emergencies. Such public training programs may be pro-

Specialized  
training for  
the public

vided in the following fields by the named Services: home health training may be provided to the public by the State Civil Defense Health Service; home or disaster nursing, first aid, and medical self-help through the Medical Service; personal survival or farm radiological defense techniques in radiological fallout situations through the Radiological Service, need for and use of community shelters and construction, stocking, and use of home shelters by the Shelter Service; community protection through survival units by the Warden Service; evacuation procedures by the Welfare Service; and the contribution of women to civil defense by the Women's Activities Officer.

The need for a complex and coordinated training effort is well illustrated by the many fronts on which shelter training is being provided to back up the current emphasis upon the shelter program in civil defense. The Office of Civil Defense Training Centers and Staff College currently provide a course titled Shelter Management Instructor. A two-week course is provided to supervisory personnel from professional architect-engineer firms in fallout shelter analysis. The current adult education course gives par-

Example  
of complexity  
training

ticular emphasis to the fallout shelter program to meet the Federal objective that

...the public must learn where shelters are, when to go and how to get to them, how to live in them, and what to expect upon leaving them to enter a postattack environment.<sup>4</sup>

Finally, a major duty of the State Shelter officer or Service is to educate all related groups and the public in the need for and the use of shelters.

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<sup>1</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1963," United States Government Printing Office: 1963, p. 74.

<sup>2</sup> Ibid., p. 72.

<sup>3</sup> Ibid., p. 98.

<sup>4</sup> Ibid., p. 70.

Information

The State Civil Defense Agency holds primary responsibility for the civil defense public information program mainly to insure that this program is closely coordinated with its training and education and other programs. The technical aspects of the program, considered as an information program, are performed by the State Civil Defense Information Service. The Information Service is provided with information in specialized functional areas of civil defense by the various State Civil Defense Services and with general over-all civil defense information by the Agency.

The responsibility of the State Civil Defense Agency is to Criteria assure that the proper criteria are met in the release of all information to the public.

First among these criteria for public information is that the information released be such as to promote, stimulate, and maintain public interest and confidence in civil defense.

Criterion to promote public interest, confidence, and cooperation

A full public airing of the justification for civil defense in the nuclear age is a vital element in the task of creating a better public understanding of the problem and its solutions.

The importance of attempting to overcome public disinterest with understanding was stressed by the President in his civil de-

fense message to the public on July 25, 1961, and by the Assistant Secretary of Civil Defense in his statement to the Congress.<sup>2</sup> In this statement, he pointed out that such objective congressional reviews with well considered congressional findings can, in themselves, serve a public purpose as means of adding public credibility and standing to current civil defense policies. He added that the extensive progress within civil defense must be made fully visible to the public in such a manner as to make sense to families and communities. By such means, the public should be informed as to their role in civil defense to stimulate public cooperation with civil defense operations, both under normal and under emergency conditions.

A second criterion of public information is imposed by Federal and State law and by Presidential and gubernatorial declarations of emergencies. In such authorities, the public has imposed upon it the duty of carrying out in an orderly manner actions that are essential to protecting their own, their family's and their community's life and property. Public information provided by the civil defense organization should be such as to guide, encourage, and maintain such actions.

Criterion to guide public responsibility to protect life and property

This information may consist of civil defense regulations or of technical advice or instructions, to insure that the actions are those that are necessary and essential. The information may consist of information or intelligence on the status and progress of all events, situations, and civil defense operations, to insure the receipt by the public of official information which in turn is necessary to assure that the public's actions are taken in an orderly manner. Such official information serves to avoid the development of a news vacuum and to prevent the spread of subversive or spontaneous rumors. In a news situation characterized by a news vacuum or the presence of rumors, it is more difficult to avoid panic, confusion, and lowered morale.

The civil defense public information is, of course, responsible for meeting a third type of criterion. All public information must be consistent with relevant standard operating procedures, with Federal to local level civil defense plans and policies, and with security requirements.

Criterion to be consistent with relevant policies and with security

The fourth criterion is that applicable to all "news" and consists of a group of criteria. The information should be complete and its flow should be continuous. It must be

Other "news" criteria

accurate and factual. It must be pertinent and appropriate. It must be timely and, in critical periods, swift. It must be effective in meeting the above mentioned criteria. Where the available media are limited, as may be the case in emergencies, only essential information should be provided. Finally, the information provided must be as needed by the public.

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<sup>1</sup> "Closing Statement, The Honorable Steuart L. Pittman, Assistant Secretary of Defense (Civil Defense), before Subcommittee No. 3 of The House Armed Services Committee, House of Representatives, July 11, 1963," p. 1.

<sup>2</sup> Ibid., pp. 1-2, 10, 12.

The technical aspects of the civil defense public information program are carried out by the State Civil Defense Information Service. These technical tasks include not only the task of disseminating civil defense information to the public, but also the preparatory tasks of providing information materials and coordinating the release of these materials.

The first technical task in providing information materials, may consist only of obtaining those materials already prepared from appropriate sources. Or, it may be necessary, as funds and time permit, to find, collect, and compile the basic data, process the data to produce a suitable form of material, and edit the prepared material. In all cases, the Information Service will need to organize information materials so that they are appropriate to the special needs of the State.

Certain civil defense emergency information or instructions can be prepared well in advance of an emergency in "canned" form. Other possible forms of material are almost unlimited. For example, the Information Service may provide materials to a central civil defense speakers'

Technical  
responsibility

Providing  
public in-  
formation  
materials

Forms of  
materials

committee or may, itself, write and present lectures. It may design and present civil defense demonstrations or exhibits. The Service may disseminate posters, films, or other pictorial materials. It may conduct news conferences for the press and may provide to the public media related news releases, scripts, and spot announcements. It may provide directly to the public pamphlets, public tours of civil defense installations, and answers to public correspondence. In connection with this task, the Information Service should maintain and make available to the public a library of civil defense reference materials. It may publish a regular information newsletter.

At the Federal level, the methods employed to provide public information have included the use of public media, publications, national organizations, and surveys and research.

All public media at the Federal level have been used. These include the press, radio, television, and special media. To insure the continuity of these media in an emergency, the Office of Civil Defense has developed a new Emergency Broadcasting System including over 1, 700 selected stations. This system will be discussed in more detail in connection with

Federal forms of material

Federal use of public media and Emergency Broadcasting System

communications in the next lesson. To indicate the variety of public media to which information materials have been provided at the Federal level in fiscal year 1963<sup>1</sup>, the 26 current OCD films were shown more than 5,500 times during a six month period through the Army Film and Equipment Exchanges, which have taken over the film distribution function. The Office of Civil Defense weekly radio series "Stars for Defense" was used by more than 2,600 local radio stations. A total of 21 major exhibits and smaller portable displays were presented at conventions and other public gatherings to more than 22.5 million persons. In addition, the Federal level produced TV films, releases for all types of media, including periodicals, trade journals, and special publications, presented billboard outdoor advertising, presented speeches, circulated technical information, and carried out promotion by publicity, construction, and demonstrations.

The use of publications at the Federal level has included<sup>2</sup> the preparation and publishing of handbooks, the preparation, production, and distribution of informational kits, the issue of information bulletins, and other publications.

Federal use  
of publication

In fiscal year 1962, printing and distribution of OCD publications was taken over by the Adjutant General's Office of the Army. Publications distributed through fiscal year 1963 have included 41 million copies of "Fallout Protection," 15 million copies of "Family Shelter Designs," 49 information bulletins, and 36 news releases. By the end of fiscal year 1962, OCD had produced 70,000 kits on "Organized Action for Civil Defense" and 13 national organizations had distributed these kits to local groups, including 18.5 million persons. Especially noteworthy, the publication "Fallout Protection" was printed in full by the New York Times, distributed as Sunday supplements by 10 newspapers, and distributed in large quantities by several business organizations and schools.

Contact with national organizations has provided the Office of Civil Defense with a major means of providing information to the public. Many national organizations have adopted resolutions or their official leaders have written letters pledging support to civil defense and, especially, to the shelter program.

Federal use  
of national  
organizations

The Federal level continues research and public opinion surveys to assess the nationwide public information program. The results of such research is made available through its information bulletins.

Federal use  
of surveys and  
research

The second technical information task involves coordinating the release of prepared materials so that they will be effective in meeting the various criteria discussed, above. Information material release must be coordinated with the State Civil Defense Agency or the State civil defense emergency operating center, with the regional and federal offices of the Office of Civil Defense, with the FCC, and with the State Civil Defense Communications Service. This complex coordination is facilitated by locating the Information Service, during emergencies, in the state emergency operating center.

Coordinating  
the release of  
public informa-  
tion

This coordination will require special message procedures to record messages and to approve messages before they are released. The chief of the Information Service will usually review, confirm and approve all information material for release, except for information from the State Civil Defense Director. He will apply the criteria discussed, above.

Message  
procedures  
for  
coordination

The assistant chief may screen information within the Service and decide how it is to be handled within the Service. The staff of the Service will log all messages received and sent according to the standard operating procedures of the Service. Such logs will include working logs of available media and message logs showing such information as type of message, pertinent data, time received and/or sent, and message number.

The third technical task, actual dissemination of public information, will be by means of all available media. During an emergency, the Information Service speaks for the Civil Defense Agency and its Director and for the Governor. It must contact as much of the public as possible, especially special groups, such as the public in community shelters or the work force. The content of the messages will shift with the onset of an emergency from information to warnings, directions, and instructions. In all cases, the criteria discussed, above, are followed.

Disseminating  
public  
information

<sup>1</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1963," United States Government Printing Office: 1963, pp. 89-91.

<sup>2</sup> Ibid., pp. 89-92.

All public information initiated by the various State Civil Defense Services is disseminated to the public only by means of the appropriate State to local levels of the Civil Defense Information Service. Certain exceptions to this regulation are made with the advice and consent of the Information Service. Warning information is, of course, excepted; this information is handled directly by the State Civil Defense Warning Service. The Information Service, also, acts as a communications medium from the public to various Services, referring all requests from the public for information to the appropriate Service.

To illustrate the kinds of information that the various Services may provide to the public, the State Civil Defense Food Service may provide information on the use and de-contamination of crops and processed foods; the Health Service may provide advice on health situations, emergency sanitation measures, and maternal and infant care; the Medical Service may provide information on first aid and home nursing; the Radiological Service may inform the public of the radioactive fallout situation and measures the public can take to minimize radiation effects; the Shelter officer or Service

may inform the public on the use of shelters; the Utilities Service may furnish information to the public on the proper use of utilities services, and the Warning Service may inform the public as to the meaning of the public action signals.

At the Federal level, the specialized field of shelters is emphasized, including the need for fallout protection for all Americans, what is being done to provide it, the need for home shelters, and the need for a balanced civil defense program conducive to the effective use of all shelters.<sup>1</sup> A survey of public opinion concerning shelters was conducted. Public media of all types were used to inform the public about the shelter program. National organizations promoted shelters. Civil defense publications emphasized shelter programs.

Federal  
public  
information

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<sup>1</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1962," United States Government Printing Office: 1962, p. 75.

Shelter

The area in civil defense that is currently emphasized by Federal policy is provision of shelter protection and effective use of shelters.

Federal  
emphasis

Research related to each of these problems is being conducted at the Federal level. On the basis of this research fallout shelter protection is being provided by locating, marking, and stocking shelters in existing buildings and by encouraging construction of shelters. On the basis of further research, guidance is provided in planning for the use and management of shelters.

Federal  
action

The first step in research on the problem of protecting life against the consequences of nuclear war was to assess the feasibility of different modes of protection against the various threats of nuclear war--blast, fire, heat, initial radiation, and fallout radiation. In the opinion of experts, the only personal defense against the medical effects of radiation is shelter. Shelters can be constructed to provide considerable protection against the other effects of nuclear war, but the cost may be prohibitive, at present. It has been, therefore, concluded to emphasize, as a feasible program, providing shelters as protection against fallout radiation. Study is, of course,

Basis for  
shelter  
emphasis

continuing in means of protecting the public against such threats as blast, fire, heat, and initial radiation and in the interrelated technical, political, and economic factors involved in providing such protection. The current program will be adjusted, of course, if new technical knowledge becomes available or if the nature of the threat changes.

An excellent summary of the considerations involved in emphasizing shelter protection from fallout radiation is provided by the NATO resolution, included in the "Instructor's Guide," which was proposed to the October 1962 meeting by the American Delegation, headed by Steuart L. Pittman, and which was adopted after being carefully considered by the delegates, their governments, and their respective scientific and military advisors. This resolution includes discussion of the place of shelters in a balanced civil defense system. It is assumed that, when the current program for provision and planning for shelter use is complete, the civil defense organization at all levels will concentrate on these and other civil defense protective and supporting activities.

Considerations related to this emphasis

5C  
Surveying,  
marking, and  
stocking  
procedures

Having made the decision that the current civil defense program would emphasize shelter for fallout radiation protection, the first concrete step in research was to set up criteria for such shelters. The Office of Civil Defense Mobilization and the Office of Civil Defense conducted research over a period of five years to improve the accuracy of techniques for estimating the radiation protection factors of structures. Research is continuing in this problem, for example, to include the effects of neighboring structures. On the basis of this research, engineering manuals were set up, stating the criteria for locating suitable fallout shelters in existing buildings. A Protective Structures Development Center at Fort Belvoir, Virginia, was initiated during fiscal year 1962 for developing, testing, and evaluating the design and construction of protective structures and associated equipment. This center includes an area where manufacturers can erect shelter structures or components, facilities for radiation shielding work, and facilities to provide technical information to authorized research and development groups.

Surveying  
procedures

5C  
Surveying,  
marking and  
stocking  
procedures

The next necessary step in research was to determine the number of shelter spaces that would be needed and to set up a realistic plan for obtaining them. The current aim of the program is to provide nationwide protection by establishing approximately 240 million spaces by the end of fiscal year 1968. This estimate considers population increases and population concentrations in specialized areas at differing times. The plan for providing these shelter spaces and current accomplishments under this plan are shown in the "Instructor's Guide." Of course, this program is dependent upon appropriate legislation and appropriations.

With definite objectives, the final research step was to conduct a test project in identifying, marking, and stocking shelters in existing buildings under the proposed techniques of the National Shelter Program. This test was conducted as "Shelter One" from January through May of 1962, in Washington, D.C., and 13 other cities in separate States. In this test, 120 shelters providing a total of more than 74,000 shelter spaces were located and licensed and 118 shelters with the total capacity of nearly 74,000 spaces

Number of spaces needed

Test of procedures

5C  
Surveying,  
marking and  
stocking  
procedures

were stocked. Methods for large-scale operation of the program were improved, as a result of the test. As a follow-up, marking and stocking were monitored in 24 cities to improve further these procedures.

The shelter survey is a unique American contribution. The techniques are, of course, suitable not only to the current program of locating suitable community shelters in existing buildings, but also to programs involving the construction of suitable community shelters. For the latter application, the criteria considered in the shelter survey can be expressed as new construction standards which may be imposed by law like our existing fire codes. Six European countries have such mandatory construction standards concerning shelters and three others are considering such programs.

An important step in the conduct of the nationwide shelter survey was obtaining qualified manpower. The Office of Civil Defense is conducting a two-week course in fallout shelter analysis which is attended by supervisory personnel from professional architect-engineer firms, at their own expense. Many students from other countries attend this course.

Surveying  
to locate  
existing  
space and  
to evaluate  
construction

Survey  
manpower  
training

5C  
Surveying,  
marking and  
stocking  
procedures

The location of shelters in existing buildings, under the so-called National Shelter Program, is a projected means of providing 90 millions of shelter spaces by the end of fiscal year 1968.

National  
Shelter  
Program

The first step in this program was taken in by the Army Corps of Engineers and the Navy Bureau of Yards and Docks who contracted with professional architect-engineer firms to make the survey, that is, to gather the required data. The collected data are computed by computer techniques. The surveyed space is considered adequate if it is found to provide a protection factor of at least 40--the factor of radiation reduction from the outside to the inside of the structure, if it provides space for at least 50 persons--

<sup>2</sup> 10 ft.<sup>2</sup> per person being a minimum in adequately ventilated shelters, 500 ft.<sup>3</sup> per person in unventilated spaces, and if it provides 1 ft.<sup>3</sup> per person for storage space.

As a result of this survey, areas were located whose protection factor could be increased by various means to the originally required protection factor of 100. During the survey, a record was made of the improvements required and the

5C  
Surveying,  
marking, and  
stocking  
procedures

estimated cost to make such improvements. The Bureau of the Census tabulated these data. Finally, these data were made available to local governments and to shelter owners. with the provision that any upgrading that was done must be at the expense of the property owners.

Also, during the survey, special facilities, such as subways, caves, mines, and tunnels, were surveyed or are included in survey plans.

Another source of shelter space is, of course, in prototype shelters. Construction of such shelters for public demonstrations and to stimulate construction will provide about 50,000 spaces. In fiscal year 1963, 641 prototype shelters were completed and 11 were being designed or constructed.

A second means of providing shelter space is through the construction of shelters in Federal buildings. In fiscal year 1962, 701 such projects were planned, providing more than a half million shelter spaces, at an average cost of less than \$32 per space. By this means, it is projected that five million shelter spaces will be available by the end of fiscal

Shelter in  
Federal  
buildings

5C  
Surveying,  
marking and  
stocking  
procedures

year 1968. Since 1960, it has been required that all Federal departments or agencies include fallout shelter designs and construction costs in their budget estimates for new Federal buildings. In 1962, \$17.5 million was made available for incorporating shelters in new and existing Federal buildings.

The third proposed means for providing shelter space, projecting 90 millions of space by the end of fiscal year 1968, is by the Proposed Shelter Development Program. The chief motive in proposing this means of obtaining shelter spaces is to provide shelter spaces in other than the downtown urban areas which would meet the needs of the daytime population chiefly. Schools, for example, are usually located according to the residential population. This program was proposed in February 1962 as an amendment to the Federal Civil Defense Act of 1950, with the following conditions<sup>1</sup>:

...legislation...which would enable the Federal Government to make payment to any non-profit institution engaged in health, education, or welfare activities constructing or modifying approved public shelter space which meets shelter standards and criteria prescribed under the provisions of this act.

Proposed  
Shelter  
Development  
Program

Payment would not exceed \$2.50 per square foot of approved fallout shelter space which:

- (1) Meets shelter standards prescribed by the Office of Civil Defense.
- (2) Is located in an area where local civil defense officials certify existing shelter is inadequate to meet the needs under approved local shelter use plans.
- (3) Can shelter 50 or more persons in one shelter.
- (4) Would be immediately available for public use as shelter in emergency.

For purposes of the proposed program, nonprofit institutions "engaged in health, education or welfare activities" are defined as follows:

- (1) Health--General or special hospitals, clinics, nursing and convalescent homes administering to the health needs of the public.
- (2) Education--Those institutions which conduct regularly scheduled curricula of instruction, and are approved or licensed by the State or local government.
- (3) Welfare--Those institutions primarily engaged in helping individuals adjust to their social environment, or in providing for the care of individuals to improve their general well being.

Under the proposed program, the nonprofit status of an institution would be determined by standards used under the Internal Revenue Code.

5C  
Surveying,  
marking, and  
stocking  
procedures

The fourth method of providing shelters is through the private initiative of home owners, industry, and others not eligible for Federal monetary grants for shelter construction. As the impact of direct Federal action is felt, it is expected that private shelter development will accelerate due to better public understanding, increased Federal technical guidance, and the influence of the Federal example.

It is planned that, by the end of fiscal year 1968, 55 million spaces will be made available by this method.

To facilitate shelter construction under private initiative, Federal, State, and local civil defense groups secure or prepare and distribute technical shelter information, such as construction designs, criteria concerning space, ventilation, sanitation, water, food and habitability, and criteria for protection from blast, fire, chemical and biological threats, and radioactive fallout. At the request of private groups or persons, civil defense officials may inspect shelters.

Related information on zoning and building codes may be provided.

As a special type of assistance, the Office of Civil

Private  
initiative

Defense and the Federal Trade Commission in cooperation with the Federal Housing Administration and other agencies have taken concerted action to encourage high quality standards among shelter dealers and to eliminate deceptive shelter advertising. New procedures for evaluating proprietary designs include the filing of proposed shelter designs with the Office of Civil Defense, which procedures are described in technical memoranda.

To encourage the building of family shelters eight designs have been published. These designs range from simple, low-cost, "do-it-yourself" shelters to complex dual purpose designs. Designs are being prepared for publication that provide, not only fallout protection, but also some blast protection.

The marking of shelters should be considered as a distinct task, to assure that the marking is official. The task is carried out according to a standard procedure involving three steps. The architect-engineer surveyor places a small black and yellow Office of Civil Defense sticker on shelters which he has found to meet the requirements. Local govern-

ments obtain the shelter owner's signature on the shelter license agreement. The Army Engineers or the Navy Bureau of Yards and Docks installs the official fallout shelter signs on the inside and outside of the shelter, on the outside of the shelter facility, and on the inside access routes leading to the shelter. At the end of fiscal year 1963, owners of more than 50,000 facilities had signed shelter license agreements covering fallout shelter space sufficient to protect more than 47 million persons... At the end of fiscal year 1963, approximately 54,000 facilities having a capacity to shelter nearly 43 million persons had been marked.<sup>2</sup>

The characteristics of the shelter agreement are important considerations within the State. They are described in the following quotation:<sup>3</sup>

Shelter  
license  
agreement

A special Government form, Fallout Shelter License or Privilege when signed by the property owner, authorizes: (1) Temporary access by the public to specified shelter space in emergencies, (2) posting and maintenance of shelter signs, (3) maintenance of shelter supplies and equipment on the premises, and (4) Federal and local government inspection. Public use of the shelter is specified as "for the sole purpose of temporarily sheltering persons during and after

any and every actual or impending attack." Public access for testing purposes is not granted and, if desired, would have to be separately agreed upon by the owner and local government.

The agreement entails no monetary payment to or by the owner. He may revoke the license unilaterally by sending a 90-day written notice by registered mail to the appropriate local government agency or to the Office of Civil Defense Regional Office. Upon notice of revocation, shelter signs, stocks, and equipment stored there would be removed by the local government within the 90-day period. If an emergency should arise during the 90-day period, the shelter still would be available for use.

No special problems with respect to owner liability are expected to arise. Forty states have enacted provisions of law, similar to the provision of the Model State Civil Defense Act developed and sponsored by the Council of State Governments, which would provide immunity to the owner of real property who licenses the use of such property on the terms contained in the license agreement.

The Office of Civil Defense has been advised by two principal insurance rating bureaus that execution of the shelter license agreement will not result in an increase in insurance premiums for general liability insurance.

As a matter of general law, the degree of care owed to such occupants of shelter space would appear to be that owed to a gratuitous licensee. An occupant would take the premises as they are. The owner's responsibility is not to willfully or recklessly harm such persons and to point out hidden danger or unsafe conditions. The degree of care owed to a shelter occupant would be only a step above that owed to a trespasser.

5C  
Surveying,  
marking, and  
stocking  
procedures

The official fallout shelter sign, shown in the "Instructor's Guide," shows shelter capacity. Outside signs are made of aluminum; inside signs, of steel. When required, additional signs may be obtained.

Official  
shelter  
sign

The final objective...is to stock public fallout shelters... Basic elements in meeting this objective are identification, development, selection, procurement, distribution, and storage of essential survival items.

Stocking  
procedures

Essential survival items are: basic food rations, water containers, sanitation kits, medical kits, and radiological kits. The Federal Government develops, selects, procures, and distributes these supplies at the lowest possible cost. Local governments are responsible for requisitioning these supplies, placing them in licensed shelters, filling water containers, and assuring their security, maintenance, and availability for emergency use.

The provisions are expected to be usable for at least five years and are considered adequate to sustain life and maintain shelterees in condition to resume active and productive life upon emergence. Supplementary provisions, to improve the comfort of shelter occupants may be supplied locally if desired.

In fiscal year 1963, cumulative procurements were sufficient to serve 50 million shelter occupants. This represented a cost of about \$2.42 per shelter space.<sup>5</sup> This

Procurement  
and  
distribution

5C  
Surveying,  
marking and  
stocking  
procedures

The provisions are made available for distribution within 25 miles of the shelters, by locating them in 81 warehouses throughout the country.

Emergency drinking water is essential. With water alone life can be preserved for days. The water to be stocked in shelters will represent 17-1/2 gallons for every five shelter spaces. With this supply, plus about 6 gallons per shelter space which can be trapped in the buildings providing shelter, plus the probable available water in water mains, the shelter population can be sustained for the first few weeks. The techniques for providing water supplies in shelters avoids shipping the water itself. Instead standard containers are provided, which are reliable for long-term storage of water. These are to be filled at the shelter, from sources meeting Public Health Service standards, according to instructions on the container. Instructions are also given on the container for dispensing the water. Finally, the container can be re-used as a commode according to further instructions.

The community shelter survival rations are based on the April 1962 statement of the Food and Nutrition Board

Water  
containers

Basic  
food  
rations

5C  
Surveying,  
marking, and  
stocking  
procedures

of the National Academy of Sciences National Research Council.

The ration is 10,000 calories per shelter space, adequate for sedentary conditions. It is expected that food from nearby sources can be obtained, except in areas of intense radiation.

The ration is provided in a standard case, with its date of packing noted, containing 2340 crackers. The basic ration is a cereal base biscuit or cracker, low in protein, since with limited water a high protein diet is considered harmful.

Various types of acceptable biscuits or crackers have been developed by The National Biscuit Company for the New York State Civil Defense Commission, by the Midwest Research Institute for the State of Nebraska, and by the U.S. Department of Agriculture. A forth supplementary food item is a carbohydrate used with the cereal base cracker for up to one third the weight of the total food ration. This was developed by the Armed Forces Food and Container Institute.

The community shelter sanitation kit for waste disposal was developed in 1962. Two sizes--for 25 persons and for 50 persons--are available. This kit

Sanitation  
kits

5C  
Surveying,  
marking, and  
stocking  
procedures

consists of a 17-1/2 gallon drum containing a polyethylene liner, a commode seat, toilet paper, commode chemicals, sanitary napkins, a waterless hand cleaner, individual paper drinking cups, and other items. This kit was found adequate in field tests supervised by the U.S. Public Health Service. It will be manufactured by the workshops of The National Industries for the Blind.

The community fallout shelter medical kit, in two sizes--for 50-65 persons and for 300-325 persons--was developed by the Office of Civil Defense following the publication, "Family Guide Emergency Health Care," issued in 1961 by the Department of Defense and the Department of Health, Education, and Welfare. The proposed medical items for the fallout shelter medical list were reviewed and modified by The Committee on Disaster Medical Care of the Council of National Security of the American Medical Association. Finally, the medical items were approved by the Division of Health Mobilization of the U.S. Public Health Service, in March of 1962.

Medical  
kits

5C  
Surveying,  
marking, and  
stocking  
procedures

They... provide an austere capability to save lives and alleviate suffering by (1) preventing disease and checking its transmission, (2) controlling emotional stress, and (3) controlling disease symptoms to alleviate suffering and prevent complications. Medication and devices are not provided for chronic diseases, childbirth, or for the purposes that require a high degree of professional proficiency.<sup>6</sup>

The community shelter radiation kit contains: a low-range bet-gamma discriminating survey meter (CD V-700) for monitoring food, water, and personnel; a high-range survey meter (CD V-715) for monitoring inside and outside the shelter; two dosimeters (CD V-742) for measuring personnel exposure, and a dosimeter charger (CD V-750) to reset and recharge dosimeters; instruction and maintenance manuals; batteries; and accessories. When shelters approved by the government are provided with adequate communications and geographic coverage, some official monitoring and reporting stations may be located in these shelters. Radiological monitoring will be necessary in all shelters when operational monitors and their instruments are away from shelter. Therefore, all shelters in the current program are equipped

Radiological  
kits

5C  
Surveying,  
marking and  
stocking  
procedures

with the radiation kit and with monitors trained to use them.

In fiscal year 1963, these kits were furnished to approximately 32,000 shelters.

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<sup>1</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1962." United States Government Printing Office: 1962, pp. 6-7.

<sup>2</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1962." United States Government Printing Office: 1963, p. 24.

<sup>3</sup> Ibid., p. 24.

<sup>4</sup> Ibid., p. 32.

<sup>5</sup> Ibid., p. 30.

<sup>6</sup> Ibid., p. 31

5C  
Use and  
management  
procedures

Planning for the use and management of shelters is a concerted effort at all levels of government and civil defense.

The actual planning is done by the political jurisdictions of the State in cooperation with the owners of the buildings in which the shelters are located. Extensive assistance in planning is provided by the State to local Civil Defense Agencies and the State Civil Defense Shelter Service or officer, with the cooperation of the Federal Government. The Governors of the States, meeting on July 24, 1963, encouraged the nationwide fallout shelter development program.

Planning must consider several steps. It is critical that the shelter program be backed by improved public understanding. It is necessary to provide means to alert the public, through their local governments, to take shelter. Further, it is necessary to maintain a flow of information and instruction to the public while in shelter. Finally, it is necessary to advise the public in shelters when to leave shelter and what specific actions they must take upon leaving to meet possible residual contamination situations.

Actual entry into shelter must be regulated, whether

Planning for  
use and  
management

Informing  
the public

Regulating  
public entry

for the public or for civil defense personnel. As with all public movements, the State Civil Defense Police Service will act for the State, county, and local governments in regulating public traffic into the best available shelter, according to appropriate State to local level civil defense plans.

Each State Civil Defense Service must have detailed plans for its personnel as to when to take shelter, who shall take shelter, special procedures to be completed before taking shelter, and procedures to be followed by all personnel if they are out of contact with their command. If such personnel are in a dispersal movement, they will be required to follow the civil defense plan of the locality in which they find themselves. This plan may require that they continue their dispersal or that they take specified or the best available shelter. In some Services, for example, the Communications Service, specified personnel will be required to remain on duty through the attack and shelter time phase, if they are in no immediate danger. The may be required to make every effort to establish communications with their Service command, if they are key personnel with duties specifically assigned for

Taking  
shelter in  
each Service

this time phase; or they may be instructed to avoid such communications efforts until this time phase is over. In certain Services, such as the State Civil Defense Utilities Service, all on-duty personnel may be required to carry out standard operating procedures for shut down of utilities before taking shelter. For all persons, the public or civil defense personnel, it must be understood that the instruction to take shelter includes the instruction to remain in shelter until official notification to leave is received.

The specific task of maintaining order in shelters is the responsibility of the State Civil Defense Police Service. Much of the task of shelter manager is connected with this. The adequacy of the shelters in use, the thoroughness of the shelter manager's training, the completeness of the flow of information and instructions to shelterees, of course, all contribute to this aim.

Maintaining  
order in  
shelters

Controlled Movement

Current policy is to deemphasize the importance of controlled movement and to emphasize shelter as actions to be taken immediately before attack.

The preference for shelter is based on decreased warning times, increased weapons yields, and upon the difficulties of controlling large scale movements of the public.  
Further, maximum use of shelters would be valuable as a control measure, per se, especially in the control of panic.

A widespread shelter system providing people with a place to go in an orderly manner with trained leadership and a means to communicate is the best antidote to panic or other spontaneous behavior undermining law and order. Thus a shelter system can provide an important return in an emergency short of war.<sup>1</sup>

Therefore, the official order to move large groups of the public is likely to be issued by the State Civil Defense Agency only as a means of removing the public from areas where radioactive fallout in excess of that for which shelter protection is adequate has occurred or is anticipated. The Agency, in such instances, would, also, designate the areas that are near and are fallout free to which such groups can be moved. Further, the Agency would indicate when such groups could return, that is, when the area is fallout free.

Control  
movem  
versus  
shelterRespon  
and cri

In planning and operations, it is, however, important to consider the types of movement which can occur as opposed to those which are officially ordered.

Types of movement

Early dispersal may occur on a voluntary basis without orders. No civil defense control of such movement would be required if it did not disrupt traffic or cause widespread confusion or panic. Such early dispersal would be quite variable in distance and direction. Early dispersal may be expected upon threat of attack or natural disaster or in a state of unusually high international tension.

Early dispersal movements

Most State civil defense plans provide for strategic movements of specified groups before an attack or disaster or when attack is believed likely but not imminent. Such groups may include mothers, infants, invalids, and the like. To be effective, such strategic movement must be rigidly controlled.

Strategic movements

Limited and small scale tactical movements may occur at county and local levels and large scale tactical movements may occur at all levels within the State, when attack or disaster is considered imminent. Such tactical movements would not be appropriate to major population concentrations since warning times will be too short.

Tactical movements

Post-attack or post-disaster remedial movements may be required because of inadequate shelter, change in fallout patterns, or progressive threats in natural disasters. Such movements must be rigidly controlled and should use officially designated routes.

Post-attack movements

It can be expected that straggler movements will occur on the periphery of an attack or disaster as an unorganized, aimless, confused milling about. When such straggler movement occurs, prompt control is essential to prevent its interference with emergency operations and to preclude serious disruption of law and order. The control may consist of directing the movement into officially designated routes or of assigning the persons involved with simple, essential, temporary, on-the-spot emergency tasks.

Straggler movements

Since movements of the public can occur, even when not ordered by the State Civil Defense Agency, complete planning for emergency situations includes assigning to appropriate civil defense elements specific tasks for controlling such movements. Some of these tasks are discussed briefly, below, to illustrate tasks involving controlling and facilitating movements of any kind and to illustrate types of movements of limited groups of the public under limited conditions.

Planning for controlled movements

<sup>1</sup> "Closing Statement, The Honorable Stuart L. Pittman, Assistant Secretary of Defense (Civil Defense) before Subcommittee No. 3 of The House Armed Services Committee, House of Representatives, July 11, 1962," p. 13.

5D  
Dispersal  
route  
procedures

As part of the State civil defense plan, the State Civil Defense Police Service designates dispersal routes which it can prepare to regulate in its traffic control operations. As emergency conditions develop, it may become necessary to refine these designations by preparing graphs and schedules for different types of movement on a priority basis.

To facilitate ordered movements of all types, including movements of the public, and to control public movements that do occur, it may be necessary to provide transportation. This task is appropriately assigned to the State Civil Defense Transportation Service.

Under similar conditions, it may be necessary to perform highway maintenance tasks, such as establishing detours, removing obstacles, and temporarily repairing highways, to maintain the dispersal routes in usable condition. This task is assigned in many State plans to the State Civil Defense Engineering Service.

Designating  
dispersal  
routes

Providing  
transportation

Maintaining  
dispersal  
routes

5D  
Movement  
control  
procedures

The traffic control responsibility of the State Civil Defense Police Service includes control of any public movements that may occur. The methods of control are the same for this specialized aspect of the task as for general traffic control. Police lines may be set up to screen and redirect public movements.

The measures taken depend upon local conditions; therefore, the actual directing of the public may be carried out in large part by local levels of the Police Service. In general, the aim of such control is to direct any movement of evacuees that is in progress into shelter, as was discussed above, or into controlled dispersal routes to available reception or support areas.

Controlling  
public  
movements

Criteria

**5D**  
**Dependent  
movement  
procedures**

It may be possible to plan before an emergency for the automatic dispersion of certain dependent groups to locations where their care can be continued with minimum danger to themselves and minimum interference with other civil defense operations. Such dispersals may be planned to be automatic upon receipt of certain types of warning, for example, at the beginning of the critical tension time phase; that is, specific orders from the State Civil Defense Agency to initiate such movements may explicitly be not required.

**Automatic movement of dependents**

Any departments or agencies of the State Government and any similar private groups who have custodial responsibility for specialized groups may prepare such plans. For example, the Departments of Correction or Mental Health or the Youth Authority may prepare such plans and carry them out with the cooperation of the State Civil Defense Police Service and the State Civil Defense Health Service.

**Criteria**

**5D**  
**Casualty**  
**movement**  
**procedures**

**The orderly and effective movement of casualties**

**Criteria**

must be carefully planned and, of course, these plans must be flexible enough to meet actual conditions. It can be anticipated that large numbers of casualties will be involved. Detailed and flexible plans are required to move such masses of casualties with minimum interference with other emergency operations.

A system of stations along special casualty transportation channels may be set up and operated by the State Civil Defense Medical Service. For example, casualties may be moved from damaged areas to field first aid points, next to principal first aid stations, then to improvised emergency hospitals, next to existing hospitals, and finally to recuperation points.

**Moving**  
**casualties along**  
**special channels**

All of the details of such an operation involve professional medical considerations. For example, although provision of transportation for this movement may be assisted by the State Civil Defense Transportation Service, it will be necessary for the Medical Service to specify the specialized medical aspects required in such transportation. As a further example, the Rescue Service may include litter units

**Medical**  
**responsibility**

5D  
Casualty  
movement  
procedures

in the field who bring rescued casualties into this channel.

Their procedures in handling wounded persons must be set up in coordination with the Medical Service. Each point in the casualty movement route as well as the transportation from the point to point requires careful medical planning and direction during operations. Each point will require specialized equipment, personnel and administration, to provide means for receiving casualties, screening them, treating them, and discharging them to the next point. Of course, only the most seriously injured would pass through all points.

**5D  
Movement  
from  
contaminated  
area procedures**

A major reason for movement of the public from a given area in the post-attack time phases will, of course, be actual or predicted radioactive fallout in the area. The State Civil Defense Rescue Service will need to carry out such operations after rescue when the area is contaminated. The State Civil Defense Police Service would contrd such movements. It would, especially, be responsible for directing all traffic away from areas within the predicted path of hazardous fallout.

**Clearing  
contaminated  
areas**

5D  
Reception  
area move-  
ment procedures

When the public has been moved from a given area,  
continued contrd of their movements becomes the respon-  
sibility of the State Civil Defense Welfare Service. Since  
these persons are displaced, they require at least  
temporary welfare assistance. This assistance can best  
be given by assigning them to mass care facilities to  
effect an equitable distribution of persons in the various  
available welfare centers. This may require the re-  
distribution of persons from one welfare center to  
another, the orderly direction of transfer assignments,  
and provision of transportation, as required.

If persons are reassigned to reception areas  
which can absorb them, the Police Service controls such  
movements.

When conditions permit in the reconstruction time  
phase, displaced persons are relocated to areas of their  
own choosing by the State Civil Defense Welfare Service.  
With the completion of this operation, the control of public  
movements is complete. Such an action must be considered  
as a specific civil defense task, since premature return to  
hazardous areas or to areas of continuing civil defense  
operations must be avoided.

Assigning  
evacuees to  
mass care  
facilities

Controlling  
reassigned  
evacuees

Final re-  
locating of  
evacuees

Communications

Complementary civil defense systems are those systems that are essential to effective use of shelters and to preattack planning and post-attack operations. Used in support of the nationwide shelter system, they will assure a balanced civil defense program. These systems are: Civil Defense Warning, Communications, Monitoring and Reporting, and Damage Assessment.<sup>1</sup>

Federal policy

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<sup>1</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1963." United States Government Printing Office: 1963, p. 45.

The task of providing communications means to all civil defense groups within the State is of high criticality during all except for the earliest and latest time phases. This task implies both establishing and operating communications systems.  
Communications channels must be established in order to carry commands, warning, monitoring reports, and instructions among emergency operating centers at all levels, among groups within each Service, between each Service and the emergency operating centers, between these centers and shelters.

The Federal basic and backup communications systems carry out the responsibility delegated by the President to the Secretary of Defense.

"To provide for civil defense...communications systems to furnish Federal, State, and local officials, as well as the public at large, with emergency information and instructions." 1

National maps are included in the "Instructor's Guide" showing the basic system--National Communications System No. 1 (NACOM 1)--and the backup system--National Communications System No. 2 (NACOM 2).

**6A  
Assistance  
procedures**

The basic system provides a method for coordinating emergency government operations from the Federal to the State levels. The portion of this system between the Office of Civil Defense and its regional office is operational full time daily. The portion between the regional offices State offices can be activated within one hour. Every station in the system can provide 24-hour communications by means of teletypewriter exchange service with any government or commercial station maintaining similar service. Connections extend to the emergency relocation sites of selected Federal agencies. Part of the system has been modified to accommodate data transmission from the National Resource Evaluation Center. The system consists of leased teletypewriter and alternate telephone wireline services and has been designed for speed, flexibility, and continuity of service.

The backup system is a high-frequency radio network using modern radio teletypewriter methods. Fast routing of messages over either system is facilitated by locating the control facilities for control stations in this system in the same areas as are located the NACOM 1 communications centers. By the end of fiscal year 1963, this backup system was operational to all regional offices and to 23 States and Puerto Rico.

It is planned to extend it to all State installations and to the Panama Canal Zone, American Samoa, and the Virgin Islands.

**Federal  
basic  
system**

**Federal  
backup  
system**

6A  
Assistance  
procedures

Within the State, although the primary responsibility for providing communications means lies with the Communications Service, certain Services may be assigned their own means of communications. In this case the Communications Service provides technical advice and assistance in establishing and operating the auxiliary system.

Providing  
technical  
advice and  
assistance

The first and most critical responsibility in establishing and operating communications systems is in the State Civil Defense Agency or emergency operating center. A basic principle in control is short and reliable lines of communications and explicit and full related reporting procedures. A basic part of planning and testing the direction of operations is to make clear to all elements the principal and alternate communications locations of their immediate superiors and of elements at the same level with whom they will work within Services and between Services and the emergency operating centers. The mention of alternate locations emphasizes the need for special planning and testing under disrupted attack conditions.

Assisting  
the Agency

**6A**  
**Assistance  
procedures**

The importance of communications to command is emphasized by locating the communications center within the emergency operating center. Its importance to the various State Civil Defense Services is emphasized by locating a representative of the chief of each Service in the emergency operating center. This person will be chiefly responsible for the content of communications affecting his Service and transmitted through the communications center with the approval of the Director. For example, the State Civil Defense Information Service is responsible for preparing meaningful messages to the public, the State Civil Defense Intelligence Service times and selects the suitable form and subject matter for messages disseminating emergency information so that these messages will be appropriate to the right users at the right time. The Information and Intelligence Services may work together, wording public messages to control deliberate or spontaneous rumors which threaten to confuse and disrupt civil defense operations. An adequate reporting and communications system is essential to the State Civil Defense Radiological Service, both within the Service and to the emergency operating center. This Service, also, requires communications with the U. S. Weather Bureau offices to receive the meteorological information which is essential to predicting fallout paths. Communications systems between shelters and

**Locating  
communications  
center**

**6A  
Assistance  
procedures**

from shelters to emergency operating centers are essential, not only to assure sustained public morale and effective shelter operations, but also to collect radiological intensity data taken by shelterees, and to facilitate the use of the manpower available in shelters. Current shelter stocking plans do not include communications kits, but such kits are under development.

In establishing appropriate communications systems for each element of the civil defense organization within the State, the Communications Service must make the fullest possible use of all available communications media, personnel, and supplies.

**Resources criterion**

Communications personnel, supplies, and media exist in sufficient quantity to meet civil defense needs and are geographically located in proportion to the population, which is usually the manner in which civil defense communications systems must be located. All media should be considered. The more obvious forms of communication are in the radio, television, and wire media. Since such means are liable to at least temporary disruption during emergencies due to damage or overloading, other means should be developed. For example, the Communications Service will plan for messenger or courier service. It will plan to use mail service. Special media such as sound trucks have important applications. Many government and private organizations can provide mobile communications systems which are less

**Availability of resources**

**6A  
Assistance  
procedures**

vulnerable to attack and are more flexible during emergency operations than are fixed stations.

Wire systems are widely available, both as public systems and within private systems or governmental systems. To control overloading during emergencies, the telephone companies put into effect during extreme emergencies the use of a "Line Load Control List" which restricts outgoing calls to listed essential users. Other use of telephones should be discouraged by educating the public and all civil defense workers.

**Wire services**

Private, governmental, and public radio systems are among the most widely available media. The Radio Amateur Civil Emergency Service provides an extensive supplementary system. The Federal Communications System has published requirements, frequency allocation plans, and rules for radio systems that must be followed in their use in civil defense communications.

**Radio services**

Special attention has been given to radio in effecting the changeover from CONELRAD (Control of Electromagnetic Radiations) to the Emergency Broadcasting System, beginning in fiscal year 1962, when it became clear that the electromagnetic radiation of transmitters was no longer a military requirement. Under the new system, to be effective early in fiscal year 1964, it will be possible to provide more effective Presidential and civil defense communication with the public during emergencies.

**Emergency  
Broadcasting  
System**

**6A  
Assistance  
procedures**

Also, emphasis has been given to a fallout shelter program for selected radio stations to assure their operational capability in the post-attack fallout environment. Under this system is also included provision of standby power generators for emergency use and radio links with civil defense emergency operating centers. The key or selected stations, themselves, provide the equipment for this type of broadcasting, while the Federal government provides funds for building a suitable fallout shelter.

The ERS system will consist of approximately 1,700 radio stations reaching approximately 98 percent of the population.

- 1      "Documents on Reorganization of Civil Defense," Executive Office of the President, Office of Civil and Defense Mobilization, p. 9.

**6A  
Coordination  
procedures**

Assuming that communications means have been provided, these communications means must be used in a coordinated manner to be effective. Coordination of communications is furthered by placing all civil defense communications within the State under the control of the State Civil Defense Communications Service.

In a similar manner, the Office of Civil Defense has, in fiscal year 1963, integrated the civil defense basic and backup communications systems with the other communications systems of the Department of Defense, under the direction of the Defense Communications Agency, to provide greater backup resources for civil defense communications and more economical actions.<sup>1</sup> An important aspect of this task is the coordination of civil defense communications within the State with those at the Federal level and with those of neighboring States. This task is of continuing high criticality during all time phases.

**Coordinating  
use of  
communications**

**Federal  
system  
integration**

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<sup>1</sup> "Annual Report of the Office of Civil Defense for Fiscal Year 1963," United States Government Printing Office: 1963, pp. 49-50.

6A  
Inventory  
procedures

Maintaining  
inventories

The task of maintaining inventories of communications resources is a special case of the problem of maintaining resources inventories. Such communications inventories are maintained by the State Civil Defense Communications Service and, for their own purposes, by other Services who control important special communications systems, for example, the State Civil Defense Warning Service. Copies of these inventories should be filed at the emergency operating centers within the State at appropriate levels. As with all resources inventories, such lists should be up-to-date and complete.

As with other specialized resources inventories, certain descriptive categories will be used in listing communications resources that are peculiar to communications, per se. Inventories should name the owner or controlling group, the location and the status of availability for civil defense operations, as is the case with all resources. Specialized communications descriptive material includes type, coverage, special connections (as with other States), frequency and other appropriate information. Communications may be distinguished as in one of three general categories: public communications that are normally available, facilities established purely for civil defense functions, and communications that are assigned to civil defense functions under certain conditions sometimes with appropriate expansion.

Inventory  
categories

**6A**  
**Inventory**  
**procedures**

For such categories, the inventory should make clear to what  
groups within civil defense the facilities are made available.

The State Civil Defense Communications Service, because of its special technical competence, maintains all communications systems assigned to civil defense elements within the State. Where the facilities of the Communications Service are inadequate to this task, the Agency may contract with private groups within the State for maintaining civil defense communications. For certain Services, such as the Police, Fire, Rescue, and Transportation Services, who may control their own extensive communications systems, the Communications Service may provide advice and assistance on maintenance rather than actual maintenance. This task is especially critical before attack and in the initial recovery time phase.

The task may involve installing new equipment. It may involve periodic testing of complete systems and specific equipment items. Such testing should be sufficiently frequent to allow maintenance to be conducted before operational breakdown of communications. Tests may be scheduled routinely at the beginning of the critical tension time phase. After attack, the maintenance problem increases, requiring as rapid as possible restoration of damaged or disrupted communications facilities within the maintenance means available. This post-attack problem emphasizes the need for maintaining standby circuits as well as primary circuits and emergency mobile facilities as well as fixed communications facilities.

**A**  
Maintenance  
procedures

Maintenance support to all civil defense groups within the State involves the services of trained personnel, material resources such as parts and tools, and advice and assistance in conducting tests. Federal support may be provided in an emergency, at the discretion of the President, from Federal agencies, in protective and other work essential to making emergency repairs to damaged communications systems or in temporarily replacing systems destroyed by attack.

**Aspects of  
maintenance  
support**

Message  
procedures

Controlling  
message  
traffic

The centralized control of civil defense messages is the responsibility of the State Civil Defense Communications Service, operating through its State to local communications centers, these centers are located in or in constant contact with State to local level emergency operating centers. This control extends to the actual handling of all messages, including the receiving, logging, and routing of incoming messages and the logging and dispatching of outgoing messages.

Of course, other Services may handle their own message traffic. The State Civil Defense Police Service will have this task at its traffic control stations throughout the State. The Information Service must provide for its own message procedures. The Fire Service must handle message traffic. For these various Services, the Communications Service may take over the message handling or it may provide required or recommended procedures for handling messages.

The State may adopt a standardized message form for all civil defense messages. Any message form for logging messages should include the following types of information, as illustrated in the Office of Civil Defense Staff College Message Form, included in the "Instructor's Guide." "Issuing Organization" includes the title of the organization and its address and, if advisable, TWX

Handling  
message  
traffic in  
specific  
Services

Form of  
messages

and telephone numbers. In "Date and Time of Issue," Greenwich (ZULU) time should be used to avoid confusion, although special time techniques may be used for messages internal to a Service. In ZULU time a six-digit number shows date in the first two digits and time as 24-hour Greenwich time in the next four digits, following by "Z" to indicate ZULU time. This group is followed by the month in three letters and the year in the last two numerals. Messages should be consecutively numbered, using a different number Series for incoming and outgoing messages.

The Communications Service is not concerned with the content of messages except that it may advise all Services that messages which contain complex information or irrelevant information are difficult to log and, therefore, to retrieve when desired. To provide simple and accurate logs, care in composing messages that are simple and succinct will go farther than any special message form.

Content of messages

Distribution lists may be provided to the Communications Service with each message or as standard procedure for certain classes of messages, for example, for messages within a certain Service.

Distribution lists

Warning

One of the most critical of the responsibilities of the State Civil Defense Agency is to provide and control for the State a system to receive and disseminate warnings. The system requirement for receipt of warnings implies that the statewide system is an integral part of a larger system from which warnings are received. For this reason, because of the necessary close tie between the State and the Nation in insuring the effective and rapid functioning of warning systems, this responsibility must remain with the State Civil Defense Agency. In many States, the technical aspects of the warning function, however, are delegated to a State Civil Defense Warning Service.

For this system to be effective within the State, it is necessary that it reach into the key points of all elements of the statewide civil defense organization. There is implied, therefore, the existence of alerting and fanout call lists and procedures. These procedures have been discussed in an earlier lesson from the point of view of mobilization to effect control of the State's civil defense operations. The responsibilities of State to local Civil Defense Agencies and Services and the procedures they may follow to fulfill these responsibilities were discussed there. The present lesson discusses the warning function as a system per se.

Alerting  
procedures

The warning system is, of course, a special aspect of communications within the Nation and State. It is here discussed only as a special network for warnings. Technical communications requirements for all systems, regardless of the nature of the information they carry, have been discussed in the preceding section.

Communications  
procedures

The Department of Defense has full operating responsibility for nationwide warning systems. The following quotation from the appropriate Executive Order<sup>1</sup> describes the terms under which this function was delegated to the Department of Defense:

National  
warning  
system

Section 1. --Delegation of Authority to the Secretary of Defense.

(a)... the Secretary of Defense is delegated . . . functions (which) shall include...

.....  
(iii) all steps necessary to warn or alert Federal military and civilian authorities, State officials, and the civilian population;

(iv) all functions pertaining to communications, including a warning network...

The National Warning System which was developed and executed under this authority is also included in the "Instructor's Guide."  
For this system to be effective, each level of control--Federal, State, and local--must understand and effectively control its portion of the system.

The Federal portion of the Civil Defense Warning System, the National Warning System, connects the eight Office of Civil Defense Warning Centers with all of the 500 warning points.

The eight Office of Civil Defense Warning Centers are located at major North American Defense Command installations. Civilian warning points are strategically located throughout the continental United States. Federal warning points are located in Federal agencies who request this service and who install and maintain warning systems.

The communications system connecting these points is formed by circuits so arranged that service interruption at one point would not affect service at other points, thus allowing direct simultaneous use. The circuits are kept in operational readiness at all times. The circuit itself consists of approximately 45,000 miles of a leased special voice communications system.

Of the 500 warning points, 51 were added in fiscal 1962. In this same year, the U. S. Army Corps of Engineers began a study to determine, for all warning points, the available fallout protection and additional fallout protection necessary for operation after attack. Among Federal agencies served by this

4-13  
Overall  
procedures

system are the U. S. Army Command Headquarters, U. S. Coast Guard installations, Atomic Energy Commission, Tennessee Valley Authority, General Services Administration, the Office of Emergency Planning, and the Department of Health, Education, and Welfare.

The State portion of this system connects the warning points with several thousand local warning points, either directly or through secondary warning points. Various communications means are used for this portion of the system, including police radio, teletypewriter, and telephone circuits.  
Federal matching funds have been provided by the Office of Civil Defense to help the States in establishing, improving, or expanding, and maintaining their warning systems.

State level

The local warning systems form the point of connection of the system with the public.

Local level

The devices used to accomplish this aim vary with local conditions, available funds, and technical developments. These devices were discussed in the preceding section. In funding, Federal funds have been used to increase the local warning capability, especially in recently populated areas.

Public action signals

The Office of Civil Defense has recently encouraged development of the National Emergency Alarm Repeater System.

NEAR signals

This has involved developing a manufacturing potential for NEAR receivers in industry, conducting tests of the system in eight utility systems, developing prototype generators and receivers, and continued encouragement of legislative approval of funds for further development. This system is tested and demonstrated. Its potential is described as follows:

This system would provide almost instantaneous nationwide warning to every home, office and factory served by electric power. Indications of impending attack would be picked up by the various early warning networks, transmitted to Air Force Sector Headquarters, and when an indication is verified, the NEAR system would be activated, thereby providing warning throughout the country.

The State and local portions of the Civil Defense Warning System have assumed a new criticality when seen as related to a nationwide shelter system. The shelter system makes warning of the public meaningful. It adds, however, the important responsibility at the State and local levels that plans for warning as they apply to taking shelter must be developed for each community to include plans for warning, movement to shelter, and allocation of shelter spaces based on estimated warning time available for the specific communities.

Shelter aspects of warning

1 "Documents on Reorganization of Civil Defense," Executive Office of the President, Office of Civil and Defense Mobilization, p. 6.

2 "Secretary of Defense Urges \$300 Million CD Appropriation," Department of Defense, Office of Civil Defense, Washington, D. C., Information Bulletin No. 58, January 30, 1960, p. 5.

The State Civil Defense Warning Service does not actually operate the State to local portions of the Civil Defense Warning System, but instead provides assistance on a full time basis to the Office of Civil Defense in insuring that the statewide warning facilities are adequate for warning. However, under the special circumstances that all or part of the State to local system is disconnected from the primary circuits and the Warning Service is unable to restore contact, the Warning Service controls those parts of the warning circuits according to the appropriate local civil defense plans. This task is of continuing high criticality from preparatory time phase forward. The wide time phase spread of criticality expresses the concepts which must be considered for insuring the operability of warning circuits--that warning of attack or other related conditions can be received at any time and that the occurrence of one warning does not affect the importance of acting as though another warning might still be required at any time.

The types of information carried by the warning network include, not only attack warning, but also other emergency information such as natural disaster warning and warning of secondary attack and disaster effects such as radiological fallout.

In natural disaster, for example, the Civil Defense Warning System may be used within the State to issue flood forecasts initiated by the State Government's Department of Forests and Waters or by the nationwide Flood Forecast System. At the Federal level, the system may be used to disseminate warning of severe weather, fire, or seismic seawaves, and to assist the U. S. Air Force in search and rescue missions for aircraft reported missing. This use of the system is likely to be critical chiefly before an enemy attack or disaster.

Natural  
disaster  
warning

Especially in the initial recovery time phase, the Civil Defense Warning System may be used to transmit essential official civil defense emergency information and instructions to all civil defense groups, to governmental groups, to the public, and to certain private groups such as critical industries. Especially important would be information concerning radiological defense.

Information  
supplement  
to warning

Of course, the major intended use of the system is to receive, evaluate, and disseminate attack warnings. The process of evaluation consists of any required translation of warnings to the statewide system and obtaining of the authority of the Governor to disseminate such warnings throughout the State or to particular portions of the State to local system. As implied

Attack  
warning

in this, the system may be used to disseminate proclamations of an emergency by the Governor. In carrying out warnings, uniform standards, practices, rules and regulations must be followed.

The local political jurisdictions control warnings to the public, except that county political jurisdictions exercise such control when the areas concerned are not served by local jurisdictions.

The means of public warning must be adjusted to local conditions. Outdoor systems are widely used in localities where population concentration and sufficiently low noise levels make them technically efficient. Indoor systems are used when these conditions do not apply. The NEAR system, used either to supplement outdoor systems or used exclusively because of its rapidity and wide applicability, operates by transmitting a special power pulse of 255 cycles over utility lines to individual homes, offices, and factories or wherever electric power is provided, where the pulse activates a small plug-in receiver. As mentioned earlier, technical development of the NEAR and other public action signals is continuing to provide more universally applicable and effective closing of the last link in warning.

Public  
warning

Public  
warning  
signals

Intelligence

In all time phases, decisions of the State Civil Defense Agency or emergency operating center are based chiefly on current status reports from all elements of the civil defense organization. Certain decisions may be delegated to elements of the organization, especially during attack and shelter, initial recovery time and reconstruction phases. The Agency or emergency operating center must transmit appropriate intelligence to the Service as a basis for their decisions.

Intelligence as basis for decisions

The technical responsibility for collecting and evaluating this information and for transmitting the intelligence so developed is delegated by the Agency to the State Civil Defense Intelligence Service.

In these tasks, the State Civil Defense Intelligence Service receives considerable assistance from the Federal level. This responsibility was assigned to the Secretary of Defense by Executive Order 10952.

The basic problem in such development of intelligence as a basis of operational decisions is to assess vulnerability and damage.

Pre-attack assessment involves the analysis of the results of a range of hypothetical attacks at a specified future time to critical resources, to guide decisions as to location of operational sites, to develop future shelter system proposals, to test the feasibility of remedial movements and other civil defense tactics, to compute survival resources and stockpiling requirements, and to advise regional and State Civil Defense Directors on the vulnerabilities hazards to be expected within the areas over which they have jurisdiction.

Technical  
responsibili

Federal  
assistance

Criterion

Pre-attack  
assessment

Post-attack assessment determines the extent of damage  
and evaluates remaining resources to determine the most feasible survival operations at all levels and to determine the nationwide action that would be most conducive to recovery. Much of this assessment is by means of computer analysis, mapping, and other graphical procedures, upon which the Office of Civil Defense provides training and reference data. Post-attack assessment is conducted at regional, State, and local levels to allow these levels to act independently in case of disrupted communications.

Post-attack  
assessment

These post-attack assessments are made against a data base by compiling additional data. Computers are available for this process to assist regional headquarters in these assessments. The centrally located computer and programs are available at the National Resource Evaluation Center.

Data base

The current information that is planned at the Federal level for post-attack damage assessment includes nuclear detonation reports, weather forecasts, the computer data base, aerial reconnaissance, and onsite inspection. Nuclear detonation reports are now available from the North American Air Defense Command and in the future, will be available from the

Post-attack  
information  
categories

U. S. Air Force system for automatic surveillance of nuclear attack detonations (NUDET). Such reports include ground zero, weapon yield, height, and time. Weather forecasts are available from the U. S. Weather Bureau. Aerial reconnaissance in later stages is to be available from the U. S. Air Force by rephotographing detonation areas and comparing these photographs with stored photographs of the same area. Onsite inspection in the final time phases is to be conducted by the U. S. Census Bureau and the U. S. Department of Agriculture.

The data base is now the weakest link in the Federal dam- Status of age assessment system. Contracts between the Office of Civil Defense and appropriate agencies have been entered into for purposes of improving the data base. For example, the Department of Agriculture is determining the exact location and quantity of wholesale and retail food stocks throughout the Nation and is estimating the amount of food possessed by various types of families and consumers. The database now includes or will include data for resources such as population, railroad facilities, electric generating stations, medical manpower, food, fuel and power, engineering and construction equipment, water, medical and health resources, and educational manpower and facilities. These resources are cat-

alogued by location, capacity of facilities, physical vulnerability, number of structures indicating blast resistance, and other required data.

The collection of information from all sources is guided by the aim of obtaining all available information that is pertinent to the current situation and that may be relevant to anticipated or actual operational decisions.

The collection process itself may be the responsibility of other groups, with the Intelligence Service receiving such information according to a pre-established reporting system described for each such group in the State civil defense plan. In some cases, the Intelligence Service may collect information by means of air or ground reconnaissance units under its command. Such field units may be needed especially when communications are disrupted or when additional information is required. One important instance in which the Intelligence Service will seek or request additional information is when the evaluation indicates that critical information is missing.

The types of request for which information is to be furnished to the Intelligence Service should be described in the State civil defense plan. As far as possible, specific

Collecting  
information

Collection  
process

Types of  
request

questions should be asked. Types of requests that have been suggested include the following. Abbreviated summaries may be submitted on questions in the plan. Complete reports may be submitted. Initial essential elements of information may be submitted answering specific questions principally regarding the direct and indirect results of nuclear attack. Initial indications may be reported as partial or complete reports as answers to specific questions on any special conditions concerning the essential elements of information. The State civil defense plan may require all State to local level Civil Defense Services to report on technical information requests, with specialized questions concerning resources needs. Additional technical information requests may be made at any time by the Intelligence Service to particular Services. Special reports may be required by the State agency for each Civil Defense Service. For example, the plan may require that the Utilities Service answer the following questions:

**What public utilities services have been disrupted in what areas?**

**What damaged plants and facilities are capable of restoration?**

What material is needed for restoration work?

What engineering equipment is required for restoration work?

What is the status of power system interconnections with adjacent States?

What are the specific manpower requirements which cannot be filled locally?

Finally, all civil defense elements may be required to forward fragmentary reports, reports on one item, or reports dealing with limited aspects of the disaster situation, and flash reports, dealing with urgent and perhaps unpredictable emergency information.

Such reports and all reports should be complete but as brief as possible. If they are from eye-witness or hearsay reports, this should be indicated. If possible, the initiating group should interrogate the source. The information might be rated as to the credibility of the source and the accuracy of the information. The format may include the following: issuing organization; time, date, and serial number of report; time of observation or acquisition of the information; body of the report including what was observed; where (in geographical terms); when (time and date); evaluation of source and content, and name and position of individual submitting the report.

Form of report

Ratings of credibility of the source may be made as: A = completely reliable, B = usually reliable, C = fairly reliable, D = not usually reliable, E = unreliable, and F = reliability cannot be judged. Ratings of the accuracy of the information may be made on a scale of: 1 = confirmed, 2 = report probably true, 3 = report possibly true, 4 = improbable report, 5 = certainly improbable report, and 6 = truth cannot be judged.

Evaluation of information to produce intelligence is, perhaps, the most demanding task of the Intelligence Service. For all information collected, it is necessary to establish the relative importance of critical items. The source and contents of messages must be compared with known facts to evaluate the degree to which the message is verified, credible, or accurate. Messages must be categorized as to the specialized civil defense areas they concern and compiled or summarized accordingly. These summaries are edited to indicate only changes in situation from the last message in the same category.

Mapping techniques are useful in these procedures. They assist, also, in locating missing information, that is, in evaluating the messages as to completeness. Final editing is necessary with notation of designations for the message.

Dissemination of intelligence is by way of the State Civil Defense Agency or emergency operating center. In this, the

Evaluating  
information

Disseminat  
intelligence

Intelligence Service is responsible to the Governor.

In distributing intelligence, standard address lists may be followed for certain types of information and/or the disposition of each message may be indicated on the message. Those groups who are interested in or affected by the intelligence should receive the intelligence. This may include any group at any level of civil defense, governmental, military, or private organizations. Most civil defense intelligence will be transmitted to the regional Office of Civil Defense and to all emergency operating centers in the State. For each message, designation information should be provided as to the specific State Civil Defense Services which should receive the message, a copy of the message, or a summary of the message.

For all intelligence messages, the message should be written so as to be concise, accurate, and relevant to the actions to be taken by the addresses.

The means of transmission will be provided by the State Civil Defense Communications Service. The means selected should provide the least possible delay, in view of the extent to which communications may be overloaded, disrupted, or partly destroyed. Intelligence prepared for the public will be handled through the State Civil Defense Information Service.

Addresses

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Within each State Civil Defense Service, the requirement to collect, evaluate, and disseminate emergency information continues from the critical tension time phase through the reconstruction time phase. The manner in which such information is treated depends upon the nature of the information. This added complexity requires that the Service establish and adhere to standard operating procedures, with the guidance of the State Civil Defense Intelligence Service.

The major requirement is that each Service report all such operational information to the State Civil Defense Intelligence Service according to the special reporting procedures in the intelligence annex of the State civil defense plan for that Service or in answer to request from the Intelligence Service. This report may be by means of the Service's representative in the appropriate level emergency operating center.

As a part of this task or as a separate task, each Service reports such information to appropriate elements within its own Service, to its specialized civil defense advisory committees, to certain other Services with whom it is closely related during operations, and to the appropriate emergency operating center.

For any Service, it is required that they report information of explosive ordnance to the State Civil Defense Police Service. Any evidence or suspicion of sabotage, espionage, or other subversive activities or of fissionable materials or clandestine weapons is reported by any Service to the Federal Bureau of Investigation; the Service maintains liaison with the FBI to receive their instructions. Any Service that is in possession of information on downed or captured enemy or hostile aircraft, crews, and passengers is to transmit such information without delays for completeness to the nearest Civil Defense Agency, to the nearest Federal and State military authorities, or to the nearest Air Force Commander. In this case, the information should include the location and time of the crash, the type of aircraft, and the fate of the crew. The Service maintains liaison with military authorities for their instructions and turns over the persons involved to the nearest military authorities.

These tasks imply that each Service must maintain its own emergency information collecting and reporting system, which should be described in its own annex of the State civil defense plan. Collection of information may involve actual investigation or reconnoitering. The system is designed to assure that all elements of the Service have the same information and are fully

Reporting to  
Police Serv-  
and other  
technical gro

Maintaining  
reporting  
systems

informed, at least to the extent that they need the information for their operational decisions.

All emergency information available to a Service should be integrated to provide a current working situation map of the Service's operations at all levels

Maintaining situation map

The main function of such reporting and mapping of operations within each Service is to allow the Service to analyze its operations continuously as a basis for its own emergency decisions.

Analyzing Service functions

The adjustment of claims in the initial recovery, reconstruction, and final recovery time phases raises another aspect of damage assessment that is pertinent to civil defense.

Acting on claims

These activities are normally the function of the Judicial Branch of the State Government and the State Government's Department of Justice. Under the emergency government, the State Civil Defense Legal Service may act as the Department of Justice or may represent the State Civil Defense Agency on claims having to do with civil defense actions. When numerous claims are filed, the Governor may assist in making application for claims in county courts.

Responsibility

The judgment of the extent of damage for property taken, seized, or condemned remains in the emergency government as in the normal government the function of the Judicial Branch, that is, the courts. They may be advised in this by the State Civil Defense Legal Service, which can call upon the extensive damage assessment data resources of the Federal and State levels of the civil defense organization.

Judgment of claims

### Radiological Defense

Under Executive Order 10952, the Office of Civil Defense was delegated the responsibility to maintain a nationwide radiological defense monitoring and reporting system. Similar responsibilities for developing and coordinating monitoring and reporting systems concerning toxic chemicals or biological agents were assigned, by Executive Order 11001, to the U. S. Public Health Service of the Department of Health, Education, and Welfare, where human exposure might be involved, and, by Executive Order 10998, to the U. S. Department of Agriculture, in protecting animals and crops. Both of these departments are provided with leadership, program guidance, and coordination in these functions by the Office of Civil Defense

Federal  
responsibilit

Nationwide monitoring and reporting systems are, of course, operational only with suitable instrumentation of the best possible design, and with adequate and continuous maintenance and calibration assistance. Considerable assistance is provided by the Federal level to the State to local levels in procuring, calibrating, and maintaining such specialized instrumentation.

The Office of Civil Defense has distributed to each of the civilian Federal monitoring stations an instrument kit containing three survey meters, two dosimeters, and a dosimeter charger and two protective masks. The same kit has been provided to State and local monitoring stations within departments or agencies of the State Government, such as fire, police, and the like, and to public airports with service facilities. Before 1962, these State and local stations depended for instrumentation upon radiological defense instruments provided for training purposes, and so possibly decreased in dependability.

As supplies are exhausted, the CD V-710 and CD V-720 survey meters will be replaced with the CD V-715 gamma survey meter with ranges of 0-0.5, 0-5, 0-50, and 0-500 roentgens per hour. CD V-730 and CD V-740 dosimeters will be placed with the CD V-742 meter with a range of 0-200 roentgens.

Procuring,  
calibrating,  
and maintain-  
ing technical  
instruments

Radiological  
kit

Replacement  
instruments

A special aerial monitoring instrument is being developed. Aerial monitoring instruments Until it is available, the CD V-710 or CD V-715 survey meters can be used for this purpose.

The radiological kits are, also, being distributed to licensed public shelters. Dosimeters have been procured for emergency civil defense workers. Kits are, also, distributed for training purposes.

Maintenance and calibration assistance is, also, provided by the Office of Civil Defense. These services are furnished free, except for the cost of transportation, at 12 maintenance shops operated by the General Services Administration for the Department of Defense. Development by the States of their own maintenance facilities is being encouraged by personnel training, supplying of spare parts, Federal matching funds for batteries, tools, test equipment, and salaries, and loan and shipping of large calibrators to assisting universities. Prototypes of semiportable calibrators are being tested and some have been procured for use in the States. Federal studies of economical and effective maintenance and calibration methods are continuing.

Instruments to other groups

Assistance in maintenance and calibration

By this provision of instrumentation, a nationwide monitoring system is made feasible. The task of monitoring, evaluating, and reporting biological, chemical, and radiological data and of obtaining the necessary metereological data is, of course, of continuing high criticality at all times. This criticality increases after attack and in the initial recovery time phase. Within the State, this task, as far as it concerns biological and chemical data, is the responsibility of the State Civil Defense Biological and Chemical Service. Concerning radiological data, the primary responsibility for the task is held by the State Civil Defense Radiological Service. Other Services, because of their deployment and communications facilities, may be assigned to monitoring and reporting of radiological data. Such Services include the Engineering Service, the Fire Service, the Food Service, the Rescue Service, the Utilities Service. All Services and particular groups such as those in shelters may monitor radiological data for their own protection and, with appropriate communications, report such data to the nearest Emergency Operating Centers.

Monitoring,  
evaluating,  
and reporting  
data

To guide such activities within the State, planning and operational guides are being prepared by the Office of Civil Defense for State to local governments to develop procedures for post-attack operation of a standard radiological monitoring and reporting system.

Guidance

The aim is to attain 150,000 Federal, State, and local monitoring stations.

Monitoring stations

Aerial monitoring will be conducted by the Civil Air Patrol at public airports. Civil defense units are allowed to continue such aerial monitoring even if Security Control of Air Traffic and Electromagnetic Radiations (SCATER) is activated, as negotiated with the Continental Air Defense Command. Such aerial monitoring units are planned for 3,000 public airports by the end of fiscal year 1964.

Aerial monitoring

By the end of fiscal year 1962, 27,926 State and local and 3,475 Federal monitoring stations had been established. Future plans, delayed by limited congressional appropriations, would add about 2,300 Federal stations. The Federal stations planned include integrating about 800 existing stations of the Department of Defense into the network and developing about 1,400 additional Department of Agriculture and about 100 additional Department of the Interior field facilities. The current Federal Stations

Status of stations

include 2,405 in field facilities of the Departments of Agriculture and Interior and about 1,070 in field facilities of the U. S. Weather Bureau, the Federal Aviation Agency, and the Air Force and Navy Weather Services. Considerable expansion of monitoring stations is possible through stations in licensed public shelters, equipped with communications systems.

The task of providing to the public safeguards against radiological attack effects is being met, as to radiological effects, chiefly through the National Shelter Program, supplemented with shelter radiological kits for group protection and dosimeters for the protection of individual civil defense workers.

The Federal monitoring system has, of course, as a main objective allowing the provision of accurate and timely information on radiological hazards, facilitating the intelligent use of public and home shelters, controlling post-attack remedial population movements, allowing effective decontamination, and advising the public on proper countermeasures.

As to biological and chemical effects, under Executive Order 11001, the task of safeguarding the public is the responsibility of the U. S. Public Health Service. The Office of Civil Defense has concluded studies which indicate that such agents do not constitute a major threat against the civilian population and therefore is not emphasizing defense against these agents. The nature

Providing  
safeguards  
to the public  
against radio-  
logical effects

Against  
biological and  
chemical effects

of these threats is being continually studied.

A major objective of the Federal monitoring system, also, is to assist civil defense groups at all levels in their post-attack operations with rapid, current, and accurate information on the post-attack situation in which they must operate. In this task, additional assistance is provided by individual dose control standard operating procedures. In a more limited sense, this task is closely related to the normal task of handling large scale radiological materials accidents, which task may, also, be assigned to the State Civil Defense Radiological Service.

Finally, the State Civil Defense Radiological Service, and other specific Services are assigned with the task of performing decontamination operations. This task is most critical in the post-attack time phases and its criticality may extend well into the final recovery time phase. To illustrate the other Services who may perform decontamination, the Engineering Service may conduct emergency mass decontamination of supplies, structures, and areas. The Fire Service may provide and operate its specialized fire fighting and pumping equipment in decontamination of personnel and equipment. The Health Service may provide decontamination services for water, food, and personnel. The Supply Service may decontaminate supplies. The Transportation

Assisting other Services in their operation

Performing decontamination operations

**6D**  
**Technical**  
**procedures**

Service may decontaminate transportation resources. The Welfare Service may decontaminate personnel. All of these de-contamination operations should be conducted according to current guidance information and according to operational manuals.

Each State Civil Defense Service should develop standard operating procedures for the radiological defense of the various elements of the Service, publish such procedures before attack, and maintain such procedures current in the post-attack time phase.

In the normal preparedness time phase, each Service should appoint a Service Radiological Officer. This Officer is trained and certified by the State Civil Defense Radiological Service. In this duty, Federal training is provided

This Officer has as his chief duty advising and assisting all levels of the Service on all radiological defense matters.

This task is, of course, most critical during the attack and shelter time phase. He is especially responsible for applying radiological defense considerations to the unique operational problems within the Service. Within the Service, he supervises the distribution, calibration, and maintenance of radiological defense equipment; he supervises the maintenance of personal radiological exposure standards and the maintenance of individual dose records according to standards set by the Radiological Service. Additionally, he establishes the adequacy of radiological protection of supplies, equipment, and facilities.

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Specific procedures

At all times during emergency operations, each Service must maintain close liaison with the Radiological Service to obtain current information and instructions as to contaminated areas and the like. This task is critical during the post-attack and initial recovery time phases.

Finally, each Service, especially during the post-attack time phase when information may be limited, must consider the current radiological situation to avoid unnecessary hazardous exposure.

Maintaining liaison with Radiological Service

Considering the radiolog situation

**SUGGESTED  
LIST OF  
SUBJECTS  
FOR CASE  
STUDY**

**For Lesson 1:**

I Draw up a format for presenting the selection criteria to be followed in filling any State level civil defense position.

Illustrate the use of this format by entering tentative criteria for at least two quite different State level civil defense positions.

II Assume that you are convinced that both generalized and specialized State civil defense advisory committees are useless. However also, assume that you are required by State law to work with a general advisory committee but are free to organize this committee as you wish. In detail, how would you organize a general State civil defense advisory committee so that it is as useful to the State civil defense organization as is possible? Also assume that you need expert advice in a specialized area. In detail, how would your directive to this committee be worded so that it would produce the advice you need?

**For Lesson 2:**

III At what steps in gaining centralized control of statewide emergency civil defense operations would you expect trouble? For the most important of these trouble spots, how would you correct existing State civil defense plans to make it unlikely that this trouble spot would actually occur?

SUGGESTED  
LIST OF  
SUBJECTS  
FOR CASE  
STUDY  
(continued)

For Lesson 3:

IV List some of the research areas in which the research needed as a basis for State civil defense plans would best be conducted by the State civil defense organization. For at least one such area, describe the details of the research and describe the type of answers you would expect or want as a result of the research.

For Lesson 4:

V Name an area in which Federal assistance to the States is highly useful; name another area in which Federal assistance is critically needed by the States but in which the assistance now available is inadequate. Contrast these two areas to develop a list of tentative characteristics of successful and needed Federal assistance programs. In this list, note which items are actual characteristics of Federal assistance programs in general and which items are not but should be characteristics of Federal assistance programs.

For Lesson 5:

VI Assume that a spontaneous uncontrolled evacuation of the public is seriously interfering with civil defense operations in the immediate postattack time phase. What steps would you take to control this movement? Where would your

current civil defense plans be inadequate in guiding you in deciding what steps to take? Where would your current civil defense plans be inadequate in guiding the actions of the specific elements of the civil defense organization to which you wish to issue instructions?

VII Name at least three civil defense subject matter areas, not including shelter, in which the State civil defense organizations should now be providing more public education or training. For each area, to what group or groups within the State would you delegate the task of carrying out the needed public education or training. For the one of these three areas in which the need is greatest, what detailed guidelines would you give to the responsible group to insure that the program they carry out will meet the needs?

For Lesson 6:

VIII Assume that your State's civil defense communications system and procedures have been shown in a recent test to be seriously inadequate but that the test results gave you no specific information on which to proceed in improving the system. What concrete steps would you take to locate and specify the inadequacies? What concrete steps would you take to correct the inadequacies? Do not include another

SUGGESTED  
LIST OF  
SUBJECTS  
FOR CASE  
STUDY  
(continued)

test except as a final step to check out your correction  
measures

IX Assume that the radiological monitoring stations in your State are fully ready except that no attention has been given to developing a complete statewide radiological defense reporting system. What are the characteristics that would result in an adequate reporting system? In developing this system, where would you expect to have to put your greatest effort in achieving the desired characteristics?

SUGGESTED  
LIST OF  
SUBJECTS  
FOR CASE  
STUDY  
(continued)